
desarrollo productivo

The competitiveness of agrifoods in Central American and Caribbean countries in the context of trade liberalization

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Abstract

This study evaluates aspects of *ex-post* competitiveness, trade specialization, the dynamics of import markets, the main competitor countries, and trade protection in the six Central American and eight Caribbean countries and their main destination markets, the European Union (EU) and the United States.

Today every one of these countries is involved in regional integration initiatives, free trade agreements and multilateral trade liberalization. The countries of Central America and the Caribbean alike enjoy some degree of preferential access to their destination markets.

This analysis leads to the conclusion that several of the countries studied enjoy similar strengths in terms of the *ex-post* competitiveness of certain products, such as melons, papayas and crustaceans, as well as lost opportunities, such as those involving beef and sesame seeds in Central America and oranges and cocoa beans in the Caribbean. For these products and traditional exports (sugar, bananas, coffee), this paper also offers a partial analysis of *ex-ante* competitiveness, with reference to farm prices and yields.

Introduction

This paper summarizes the main results of a study on agrifood competitiveness in Central American and Caribbean countries, sponsored by the government of the Netherlands and carried out by ECLAC's Agricultural Development Unit. The main purpose of this study was to identify possible trade opportunities and challenges facing the agrifood sector in the subregion's countries, in a context of trade liberalization in the main import markets. From this perspective, major trade opportunities arise with the elimination of tariff barriers on products that are performing strongly from the perspective of international demand and in areas where the countries studied enjoy competitive advantages. Likewise, the main challenges appear to be associated with the unilateral reduction or elimination of preferential access currently enjoyed by some key agrifood products from these countries. This review of the current status of these preferences appears as a result of trade liberalization, which from the 1990s onward reached unprecedented levels in terms of both the sectors and countries affected.

The Central American and Caribbean countries considered here include the six Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama) and eight Caribbean countries (Barbados, Belize, Cuba, Guyana, Haiti, Jamaica, the Dominican Republic and Trinidad and Tobago).¹ In the case of the Caribbean, country selection was based on their share of subregion's aggregate value for agriculture, with the eight Caribbean economies

¹ The information necessary for the indicators used in this study was not always available in the case of Cuba, Haiti, Guyana and the Dominican Republic.

included here accounting for more than 97% of this variable. The countries selected share common characteristics, among them their small size, geographical location, cultural aspects and a colonial past. In terms of international trade relations, to a greater or lesser degree they all enjoy preferential access to the two main import markets, the United States and the European Union. Furthermore, all those selected are currently involved in regional integration initiatives, free trade agreements with third countries and/or the multilateral trade liberalization process being led by the World Trade Organization (WTO). Despite these similarities among the countries studied, there are also some important differences in terms of the levels of and trends in economic development, political regimes, trade specialization and competitiveness, which influence their international participation and their approach to globalization.

Thus, to analyse these countries' current state of agrifood competitiveness and identify possible opportunities and challenges arising from the trade liberalization process currently underway, this study has taken a broad approach to the subject, examining *ex-ante* and *ex-post* competitiveness, trade specialization, conditions in import markets, identification of the main competitors in destination markets, and trade protection. This paper is comprised of five sections, along with this Introduction. The first section describes the Central American and Caribbean countries selected according to their main similarities and differences in terms of international participation, development and competitiveness. The next section presents the methodology used, which was developed during a previous study.² The third section presents an abstract of the main results achieved by the analysis of *ex-post* competitiveness and trade protection, identifying potential opportunities and challenges for these countries. The next section discusses some aspects of *ex-ante* competitiveness, especially labour and land productivity and relative prices. Finally, the fifth section presents the study's main conclusions and suggests further areas for analysing the systemic competitiveness of the subregion's key agrifood products.

² ECLAC, with financing from the French government, worked with the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII), (Project FRA/00/S055: La liberalización de comercio de productos agrícolas; integración regional). Based on the same document, ECLAC published in this same series: "La competitividad de la agricultura y de la industria alimentaria en el Mercosur y la Unión Europea en una perspectiva de liberalización comercial" (The competitiveness of agriculture and the food industry in Mercosur and the European Union in a context of trade liberalization) and CEPII a working paper in French (www.cepii.fr).

I. Description of the Central American and Caribbean countries included in this study

The 14 Central American and Caribbean economies included in this study are, like most Latin American countries, very heterogeneous in terms of their approach to development and their economic performance in recent decades. Nonetheless, they share a set of important characteristics, which reveals a common pattern in the development of some specific macroeconomic and sectoral elements. These are associated with the countries' economic structures, the macroeconomic reform processes applied in the 1990s, and the steps they have taken to become more open to trade and regional trade integration in order to achieve growth based on structural reform policies.

The structural aspects common to these economies arise from their size, which, whether measured geographically, demographically or economically, reveal that they all are essentially small economies.³ Given their small size and the fact they are, comparatively speaking, less developed, their economic development tends to share the same internal and external limitations.

Internally, the lack of economies of scale means production costs tend to be comparatively higher than those in large countries, discouraging the accumulation of productive capital and investment in

³ This study has considered economies with more than 10 million inhabitants in 1990 to be large or medium-sized, while small ones are those whose population ranged from one to ten million, and very small economies are those with less than one million inhabitants in 1990. Thus Cuba is classified as a medium-sized economy, while Barbados, Belize and Guyana are considered very small. With these exceptions, the other ten economies are considered small economies.

infrastructure. Moreover, the fragility of public finance, evident in the important role that tariff revenues play in government income,⁴ relatively high deficits and, in some cases, significant dependency on international aid, all limit fiscal policymakers' room to manoeuvre. Externally, the relatively high degree of openness of these economies, combined with the lack of diversification of their export baskets, makes them particularly vulnerable to external shocks. In fact, because most of these countries trade primarily in a handful of agricultural commodities —essentially two or three traditional tropical products, such as coffee, bananas and sugar— they have suffered from the international trend toward lower prices for these commodities, and have moreover been faced with periods of enormous instability. The high degree of agrifood specialization in these economies (the exception is Trinidad and Tobago) has also made them particularly vulnerable to trade protection in import markets, because this is the sector where the main trade barriers persist and the most important exceptions to trade liberalization are applied.

In the case of structural reforms, in essence Central American and Caribbean countries returned to an outward-oriented approach to growth once the import substitution phase was over and the effects of the debt crisis in the early 1980s had been overcome. Within these reforms, born of a context of trade and financial globalization, the main objective sought by these economies has been to resume growth by intensifying trade ties and capital accumulation. In this sense, sooner or later most countries⁵ have had to apply policies to stabilize their main macroeconomic variables and to liberalize domestic and external markets, reducing most tariffs and price controls. Thus, it is apparent that most of these countries have reached a situation where the State plays a smaller role in productive activities, most public companies are now privatized, and more disciplined fiscal policy has come with greater stabilization and the gradual application of floating foreign exchange regimes. Their most significant achievements include bringing inflation and the exchange rate under control, although these factors have not significantly improved per capita output or ensured fairer income distribution.

In terms of trade liberalization, every country in this study has been involved in opening its economy up on a uni-, pluri-, or multilateral basis. On one hand, these countries have accepted WTO guidelines promoting multinational trade negotiations and, on the other, they have been involved in regional integration processes and free trade agreements with third countries within and beyond the subregion. In Central America, the economies of Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua belong to the Central American Common Market (CACM), while Panama, the Dominican Republic and Cuba all maintain important unilateral ties with this block and with the Caribbean Community (CARICOM), which brings together 15 Caribbean economies.⁶

Today, the countries studied maintain a series of trade agreements with third countries, acting either as integration blocks or individual nations. These agreements could eventually have more impact on these economies than the subregional integration schemes themselves. In fact, because production is structured similarly in all these countries and they all have limited domestic markets, the possibility of regional integration generating more trade tends to be limited, in contrast to what could be expected from agreements with trading partners who have more diversified productive structures and a much greater capacity for domestic consumption. Among the main preferential access or free trade agreements achieved by the countries studied with third countries, those with Mexico, Canada, Venezuela, Colombia and Chile stand out. Moreover, except for Cuba, the countries studied are currently involved in negotiations to create a Free Trade Area of the Americas (FTAA).

⁴ In fact, during the 1990s, customs revenues represented on average 24% of total tax revenues in both Central America and the Caribbean. This heavy dependency of public treasuries on customs revenues becomes even more apparent if specific countries are analysed more closely, for example, Costa Rica, where customs revenues accounted for 36% of total tax revenues during the past decade, or Belize, where they represented 54%.

⁵ In Cuba, significant areas of the economy remain under state control; however, incipient reforms are apparent and are starting to create a mixed sector focusing on services and some export items.

⁶ Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Granada, Guyana, Haiti, Jamaica, Montserrat, San Cristóbal and Nieves, Santa Lucía, San Vicente and the Grenadines, Suriname, and Trinidad and Tobago.

In terms of generating trade within subregional integration blocks and the impact of more open policies on the balance of trade with third countries in the 1990s, total trade and trade among Central American Common Market (CACM) and CARICOM group members intensified over the past decade, in the case of both exports and imports. But how this growth occurred among countries varied substantially. In the case of the CACM, the block as a whole saw its trade deficit with the rest of the world almost triple. Among these countries, Costa Rica maintained practically the same deficit with countries outside the CACM in 2000 as it did in 1990, while other block members saw their deficits soar, especially El Salvador and Honduras.

In the case of intragroup trade, the CACM countries also performed differently: Costa Rica moved from a deficit to a surplus with other block members, and Guatemala improved its previous surplus, while other members saw their deficits increase. In the case of the CARICOM countries for which information is available, the general trend was for trade deficits, whether with other group members or third countries, to rise, except for Trinidad and Tobago, which as an oil country managed to boost its surplus with other block members, especially Jamaica. Externally, the least developed of the CARICOM countries tended to see their deficits rise more than the more developed countries (again, Trinidad and Tobago was an exception).

Although they share a common structural/international framework, the countries studied show varying levels of development and perform differently in terms of growth. This is clear from analysing *per capita* Gross Domestic Product (GDP) for 1990-1999, for which levels and rates are provided in table 1. According to this analysis, and considering that the subregion's overall per capita GDP rose at an annual rate of 1.5% from 1990 to 1999, two groups of countries become clearly apparent: "emerging" countries, which grew more than the subregion's average; and lagging countries, which grew less than average or even contracted. The first group includes Guyana, the Dominican Republic, Costa Rica, Panama, El Salvador and Trinidad and Tobago, while the second is composed of the other countries from table 1. However, if emerging countries' initial situation is examined more closely, it is clear that in 1990 Trinidad and Tobago, Costa Rica and Panama were already among the five richest countries studied, while El Salvador, the Dominican Republic and Guyana were among the seven poorest. Among the lagging countries, several had mid-range growth rates, specifically Guatemala, Belize, Barbados, Nicaragua and Honduras. Among this group, however—as with the previous case—initial wealth levels varied, since in 1990 Barbados was already and continues to be the wealthiest country in the sample, while Belize has moved from fifth to fourth place in this same category. Guatemala, Honduras and Nicaragua, meanwhile, were among the five countries with the lowest per capita GDP. Finally, the three poorest performers were Jamaica, Cuba and Haiti, which experienced negative growth during this period. In this group, Jamaica and Cuba, which in 1990 were among the seven countries with the highest per capita output, were particularly hard hit.

Similarly, although the countries studied by and large specialize in the agrifoods sector, except for Trinidad and Tobago, they show significant differences in the degree and behaviour of this specialization. In the first place, for the agrifoods sector as a whole, it is essential to differentiate between countries with historic deficits, whose sectoral exports are not enough to finance their high levels of grain and other basic food imports, and those countries that are net agrifood exporters. Most of the Caribbean countries fall within the first group, while the Central American countries could be classified in the second. In fact, using the United Nations Food and Agriculture Organization's definition, most of the countries making up the Caribbean subregion and almost half those belonging to CARICOM are net food importers. Similarly, a third category could be defined, which arises with more open policies, and includes those countries that started with a clear surplus and saw their agricultural imports rise much more quickly than their exports, thus seriously harming their international position. These last include Honduras, El Salvador and, to a lesser degree, Nicaragua. At the same time, the case of Trinidad and Tobago stands out as it clearly reduced the external dependency of its agrifood sector.

Table 1
PER CAPITA GROSS DOMESTIC PRODUCT (GDP), 1990-1999
(Levels in dollars at constant, 1995 prices, and average annual growth rates)

Country	1990	1999	Growth
Guyana	555	843	4.7
The Dominican Republic	1 368	1 916	3.8
Costa Rica	2 992	3 994	3.3
Panama	2 523	3 246	2.8
El Salvador	1 378	1 752	2.7
Trinidad and Tobago	4 094	4 936	2.1
Guatemala	1 358	1 545	1.4
Belize	2 543	2 768	0.9
Barbados	7 330	7 963	0.9
Nicaragua	460	472	0.3
Honduras	682	689	0.1
Jamaica	1 787	1 691	-0.6
Cuba	1 998	1 511	-3.1
Haiti	502	371	-3.3
Countries studied	29 569	33 697	1.5

Source: Prepared using data from World Development Indicators (WDI), (2001), World Bank.

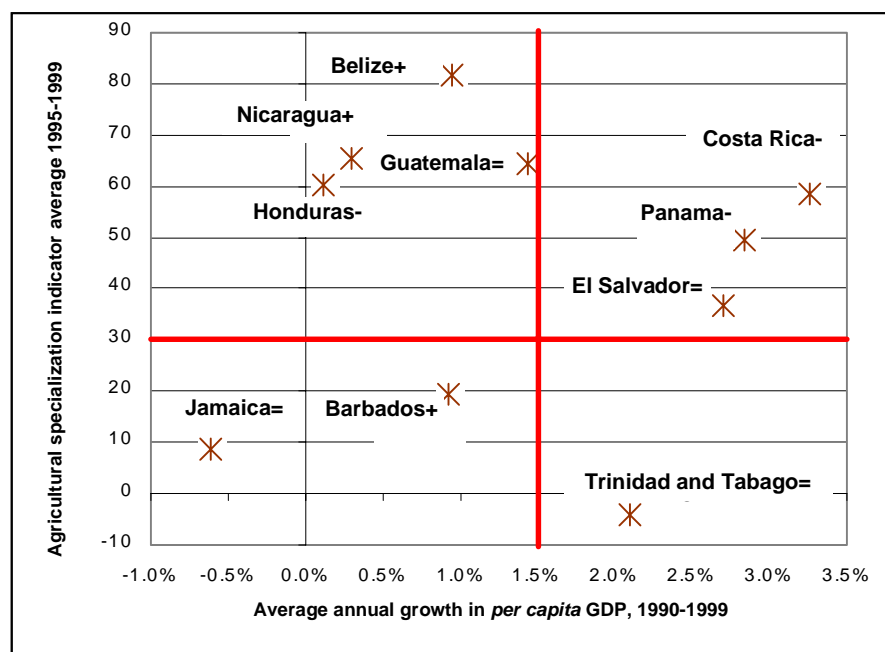
Generally speaking, in the past twenty years the trade in agrifoods of the countries studied has become increasingly specialized. This is because elsewhere in the world this sector's share of exports over total trade fell more than it did in the countries studied —worldwide, agrifood exports' share went from 13% of total exports in 1980 to 8% in 2000, while in the countries studied these fell from 39% to 31%. Using the indicator for this sector's contribution to the balance of trade in 1980-1999 as the base (see methodology section), it is possible to classify the countries studied as highly specialized in the agrifood sector (indicators over 30) and economies with insignificant specialization or no specialization at all in this sector (indicators under 30 or negative). Using these categories, Jamaica and Barbados appear with insignificant specialization levels, while Trinidad and Tobago posts negative specialization in the agriculture sector, and the seven remaining countries would be considered highly specialized.⁷ Despite high levels of specialization, specialization was declining in Costa Rica, Panama and Honduras, while in El Salvador, Guatemala and Jamaica it remained relatively unchanged. The countries becoming more specialized over time were Barbados, Belize, Nicaragua, and Trinidad and Tobago. This result is important in the case of the last country, because although it continues to post a negative indicator, the trend over this period reveals that its agricultural sector is moving toward a state of positive, although not yet significant, specialization.

Working with these categories for specialization patterns and dynamics, it is possible to establish individual country profiles that reveal considerable variety in structures and specialization among the countries studied (figure 1). Thus, the subregion contains: emerging countries that are highly specialized, although specialization has tended to decline or remain stable (Costa Rica, Panama and El Salvador); emerging countries in terms of per capita GDP growth, but with insignificant or no agrifood specialization (Trinidad and Tobago); countries that are lagging behind in growth and with insignificant agrifood specialization (Jamaica and Barbados); and finally, countries lagging behind that are highly specialized in agrifood, although the dynamics for this variable vary.

⁷ It has not been possible to classify Cuba, the Dominican Republic, Haiti and Guyana in this sense, because of the lack of information on trade.

Figure 1

**TYPOLGY OF COUNTRIES STUDIED, BY ECONOMIC
GROWTH AND TRADE SPECIALIZATION IN THE AGRICULTURAL SECTOR**
(Percentage)



Source: Prepared using data from COMERPLAN⁸ and World Development Indicators (WDI), (2001).

Notes: The + sign after the country code indicates that the sector has become more specialized compared to the previous five-year period, an = sign that it has remained the same, and a —sign that its level of specialization has dropped.

Combined with other factors, the different rates of growth and specialization that we have described tend to determine the positioning of the countries studied in terms of globalization, influencing the depth and pace of market liberalization and determining the results of this process on domestic economies. In general, both within regional integration blocks and in multilateral negotiations, different levels of development among countries tend to receive recognition, with less developed countries being allowed to advance more slowly toward liberalization. Moreover, these economies tend to benefit from unilateral preferential systems, such as the European and American Generalized System of Preferences (GSP), which guarantees some products preferential access to the markets in developed countries, including some agrifood products that are considered less sensitive. The GSP represents an exception to the most favoured nation (MFN) clause, provided for in World Trade Organization rules, whose purpose is to guarantee less developed, and generally speaking less competitive, countries have access to import markets. Today, all the countries studied enjoy unilateral preferential access to the main world import markets.⁹ The central question is that, with the advance of pluri- and multilateral liberalization, the room for unilateral preferences has tended to shrink. Moreover, in recent years, policies for granting unilateral preferences have been completely revised and a shift in strategy toward including reciprocity clauses has emerged. In any case, the reduction in trade preferences poses an enormous challenge to some of the less developed

⁸ COMERPLAN is a data base maintained by the Agricultural Development Unit and the Latin American and Caribbean Demographic Centre, both of ECLAC, based on figures from the United Nations' Commodity Trade Statistics Database (COMTRADE), New York, using Redatam (*Recuperación de Datos para Áreas pequeñas por Microcomputador*), a software programme for processing and mapping census and survey data for regional and local analysis.

⁹ While most developing countries enjoy preferential access through the Generalized System of Preferences (GSP), Central America and the Caribbean enjoy additional advantages in the United States and European Union markets, through the Caribbean Basin Initiative (CBI) and the treaty for the countries of Africa, the Caribbean and the Pacific (ACP), respectively.

economies that have specialized more in trading commodities, including some of the countries studied, which will find it difficult to compete in a world with no preferential treatment.

It is precisely because of these differences in development, specialization and competitiveness that the Central American and Caribbean economies take different positions during multilateral negotiations, particularly those dealing with the agrifood sector. On one hand, Costa Rica and Guatemala belong to the Cairns group, which brings together 17 countries considered large agrifood exporters and who favour extensive liberalization of agricultural trade. The other three countries in the CACM (Honduras, Nicaragua and El Salvador), along with the Dominican Republic, Haiti and Cuba, belong to the group of developing economies whose position favours differential treatment within agricultural liberalization. At the same time, 12 of CARICOM's 15-member countries work as a group, while some block economies also belong to the body known as Small Island Developing States. These countries are primarily concerned about the effects of reducing subsidies in developed countries, which affect international prices for agricultural products, and the effects of the possible elimination of unilateral preferences on their economies.

Finally, with regard to trade liberalization and its impact on the agrifood sector, it should be kept in mind that this sector's inclusion in trade liberalization schemes is usually troublesome. This reflects the strategic importance of the sector for both developed and developing countries, from the perspective of food safety, maintaining employment levels, fighting poverty or generating foreign exchange. More recently, farm activity has also been assigned new functions —protecting the environment, conserving rural spaces, keeping the peace and contributing to social cohesion in rural areas— which according to some views would justify the special treatment granted this sector within the liberalization process. For these reasons, the agrifood sector's inclusion in negotiations and free trade agreements has been partial.

In this context, the countries that are relatively specialized in agrifood trade, including most of those studied here, have faced trade and domestic support policies in the markets of industrialized countries that have tended to maintain high protection levels in this sector. Thus, much more than trade liberalization in general, specific liberalization of agrifood trade poses difficulties that translate into delays, resistance and in compliance with commitments assumed by countries involved in negotiations. Because of the sector's enormous sensitivity, from both the production and the consumption perspectives, the liberalization agenda tends to be broad and complex, involving a wide range of interrelated issues that are often mutually contradictory. As a result, for economies such as those of Central America and the Caribbean, which find most of their comparative advantages within the agrifood sector and whose export performance depends heavily on this sector, the challenge of achieving positive results from a trade liberalization process is all the greater.

II. Competitiveness

Any analysis of competitiveness is subject to controversy. The very concept may vary considerably from one study to another, revealing that there is no consensus on its meaning.¹⁰ Boltho (1996) argues that when studying competitiveness it is essential to clearly differentiate between the short and long term. In the short term, the main objective of macroeconomic policy is internal equilibrium (the lowest level of unemployment consistent with an acceptable inflation rate) and external equilibrium (a balanced current account). In this context, international competitiveness would be closely tied to the real exchange rate, which, combined with other domestic policies, would be capable of encouraging internal and external equilibrium. In the long term, the main policy objective is to increase the population's standard of living, which is a function of increases in labour productivity, corrected for the increase in total factor productivity and changes in the terms of trade. Simply put, the long-term trend in labour productivity could be used as a proxy for the behaviour of competitiveness.

The Organisation for Economic Cooperation and Development (OECD), defines competitiveness as the degree to which a country is capable of producing, under free market conditions, goods and services in line with the needs of international markets, at the same time as it maintains or increases the population's real income in the long term (OECD, 1992). In a recent paper (IDB, 2001), the Inter-American Development Bank links an economy's competitiveness with the creation of the conditions necessary for business development and a

¹⁰ For a critical view of competitiveness and its many meanings in current economic theory, see Krugman (1996).

sustained increase in productivity and per capita income. In the IDB's view, a country's export performance and competitiveness level are distinct but interrelated concepts, in that export success tends to be the consequence of high levels of competitiveness.

The present study recognizes the link between export performance and competitiveness, in the sense that it is assumed that to a significant degree international trade "reveals" competitiveness. The set of indicators based on countries' foreign trade information, analysed in this section, reflect something that economic theory has agreed to call *ex-post* competitiveness. These contrast with productivity and relative price indicators, which characterize *ex-ante* competitiveness and will be presented in the next section.

A. *Ex-post* competitiveness

1. Methodology

The methodology for analysing agrifood competitiveness used in this study was applied in two previous ECLAC studies. The first was published in a paper by Gutman and Miotti (1995) and the second, more recent, work was developed jointly with the Centre d'Études Prospectives et d'Informations Internationales (CEPII) (see Mulder *et al.*, 2003). Essentially, it involves studying competitiveness from different perspectives, applying an *ex-post* analysis to elements such as market shares and an *ex-ante* analysis to others such as productivity and relative prices. At the same time, demand dynamics play a central role in this analysis, in the sense that these make it possible to classify countries' competitive strategies according to their degree of adjustment to trends in consumption and therefore long-term sustainability. This analysis also attempts to distinguish between trade specialization and competitiveness, concepts that are often treated as synonyms.¹¹ The position of and dynamics affecting the main countries competing in the destination markets of selected agrifood sectors are also considered. Finally, trade protection is taken as an indicator for product sensitivity in import markets, a factor relevant to defining bargaining strategies and the opportunities that should arise for the most competitive exporters in the case of liberalization.

The first step in studying the agrifood competitiveness of the countries in this study was to define what is understood by the agrifood sector in international trade statistics. Primary farming and livestock activities were included in this definition, along with agribusiness sectors falling under chapters 0 (food and live animals), 1 (beverages and tobacco), 21 (raw hides, skins and furskins), 22 (oil-seeds and oleaginous fruits), 231 (natural rubber), 261 to 265 (raw textile fibres), 29 (crude animal and vegetable materials), and 4 (animal and vegetable oils, fats and waxes) of the Standard International Trade Classification, revision 1. Excluded from this definition of the agrifood sector were forestry products, because this sector has its own competitive profile, which requires specific studies.

Within the agrifood sector, products were selected for which the countries studied enjoyed their main comparative advantages, thus reducing the range of cases to be examined. The indicator used to identify the main agrifood products was their contribution to the balance of trade (Lafay *et al.*, 1989). This indicator is based on the assumption that in the absence of a comparative advantage or disadvantage, the country or region's balance of trade is distributed among the different sectors or products according to their relative importance within the country's or region's foreign trade. By comparing the real trade balance with the theoretical or expected one, which

¹¹ As per Lafay *et al.* (1989), competitiveness tends to be powerfully influenced by situational variables, particularly the exchange rate, while specialization shows some structural characteristics, partly reflecting domestic agents' investment decisions. Because of this, specialization tends to be more stable than competitiveness over time. Another difference is that competitiveness indicators are calculated for the same product in different countries, while specialization measures the use of a single country's productive factors in different products or sectors.

includes the sector's or product's share over the country's total trade, we were able to estimate comparative advantages and disadvantages for different areas. A positive value for this indicator points to the presence of a comparative advantage for a sector or product; a negative value indicates a disadvantage for the country in the sector or product under consideration. The indicator for balance share, which thus expresses the country's specialization profile, takes the following form:

$$c'_{ik} = p'_{ik} - (g'_{ik} \cdot p_i)$$

where:

$$p'_{ik} = 100 \cdot \left(\frac{(X'_{ik} - M'_{ik})}{\left(\frac{1}{2}\right) \cdot (X_i + M_i)} \right)$$

$$p_i = 100 \cdot \left(\frac{(X_i - M_i)}{\left(\frac{1}{2}\right) \cdot (X_i + M_i)} \right)$$

$$g'_{ik} = \frac{(X'_{ik} + M'_{ik})}{(X_i + M_i)}$$

with X_{ik} being the exports for product or sector k for the country i , M_{ik} the imports for product or sector k for the same country i , X_i total exports for country i and M_i total imports for country i . The ' symbol in the above formulae indicates that export and import data have been corrected using the following index:

$$e_k = \frac{(W_{kb}/W_b)}{(W_{kn}/W_n)}$$

where W_{kb} corresponds to world exports for product or sector k in the base year (here 1980); W_{kn} are world exports for product or sector k for each year of the data series; W_b is total world exports in the base year and W_n total world exports for each year in the series.

Based on the calculation for the trade balance share indicator for the different agrifood product categories from the SITC, revision 1, for the countries studied, grouped into Central American and Caribbean categories¹² for the 1980-2000 period, items were selected for the competitiveness study if they met the following conditions:

¹² As mentioned previously, unfortunately COMERPLAN has no information for most of the relevant years for Cuba, Guyana, Haiti and the Dominican Republic. Because of this, the analysis of agrifood specialization in the Caribbean subregion is solely determined by the other countries within the subregion included in this study (Barbados, Belize, Jamaica and Trinidad and Tobago).

(a) For the last five years analysed, the indicator for the item's share of the trade balance had a value of over 0.10 in the case of the Caribbean and 0.20 in the case of Central America, or, where this criterion was not met, the item accounted for more than 1% of agrifood exports.

(b) For the same period, the item showed a positive trade balance. Analysis of the variability of the trade balance share indicator has revealed that where values for this indicator are very low, although positive, it is hard to confirm the existence of comparative advantages, given such strong variability (Gutman and Miotti, 1995). Because of this, we opted for choosing only those products with some degree of specialization, eliminating other items with positive but very low values for this indicator.

The purpose of analysing countries by grouping them under Central America, on one hand, and the Caribbean, on the other, was to achieve valid alignments for these economies overall, because in general they tend to participate together in international trade negotiations. Nonetheless, by grouping the countries studied in this way —instead of considering them individually— we reached a specialization indicator strongly influenced by the most important agrifood exports within each respective group. To minimize this effect, as well as the specialization of country groups, we also considered the individual specialization of each country as a criterion for selecting the products that should be the subject of the competitiveness analysis. Thus, to be selected, the product in question had to meet the criteria defined above for the country groups considered and, at the same time, had to meet the same criteria in the case of at least half the countries in the group.

Once the main agrifood products in which these countries specialized had been selected, they were classified by their degree of specialization (the level and change in this indicator in recent decades) for: (i) products in which these countries have traditionally specialized, and (ii) products for which specialization was weak or incipient. Traditional products weigh enormously on the subregion's exports and economic activity, thus requiring a more detailed analysis of their current competitive status. At the same time, incipient products may become more or less important to the region, depending on how import markets and regional trade strategies behave.

The next step consisted of selecting the main import markets and evaluating their strength compared to trends in world agrifood trade. Because revision 3 of the SITC, which is the most disaggregated, only came into effect for all countries in the mid-nineties, this analysis of long-term specialization required the use of SITC revision 1. Nonetheless, the indicators that follow do not require such a long-term analysis as that for specialization, because they deal more with situation-driven rather than structural measures. Based on this, we therefore chose to work with a better level of desegregation, although this meant using a shorter period for the analysis. Trade statistics used for this analysis, therefore, were codified according to SITC revision 3, with each code from this revision assigned the corresponding specialization level obtained using revision 1.

Because the countries studied are very specialized, not only in terms of export products but also trading partners, it is possible to work with a small group of import markets whose performance has a decisive influence on the subregion's competitiveness. For each agrifood product classified as a product of traditional or incipient specialization in the subregion, comparing import growth in selected markets with growth in agrifood world trade yields a classification according to the comparative strength of the markets, using the following categories:

- | | |
|---------------------------------|--|
| (i) very strong markets: | growth rate more than double growth in world trade for this sector; |
| (ii) strong markets: | growth rate up to double world trade for this sector; |
| (iii) stagnant markets: | growth rate positive, but less than that for world agrifood trade, and |
| (iv) weak markets: | negative growth rate for imports. |

Strong and very strong markets are particularly relevant from the perspective of identifying trade opportunities for the countries studied, given the room within these markets to increase export volumes and, above all, to obtain higher and/or more stable prices as compared to other, weaker agrifood products.

Likewise, products that stand out for their quality tend to obtain higher prices, with producers often operating as oligopolies in segmented markets. Specialization in this kind of product can also be considered a desirable competitive strategy; this is why we tried to identify these items for the countries studied, considering the agrifood products and markets chosen. In a specific import market, the product from one country may be considered different from the same product produced by other competing countries if price differentials are significant. In this study, we consider a 15% price difference sustainable over time to indicate the presence of product differentiation. The indicator for measuring price differentials among products from one country and from its competitors is the import's relative unit value (*valor unitario relativo de las importaciones, VURI*), obtained using the following formula:

$$VU_{ijk} = \frac{pM_{ijk}}{pM_{jk}}$$

where pM_{ijk} is the unit value (value/quantity) for imports of product k into country j from country i and pM_{jk} is the unit value for imports of product k by country j . For the countries studied, a value of more than 1.15 for this indicator in the main import markets, sustainable throughout the 1990s, allowed us to work with the product differentiation hypothesis and to select cases where this occurred for a more detailed study of competitiveness. Note that to minimize problems arising from the aggregation of different products from the same trade group, the primary information used for this indicator was as disaggregated possible, that is, based on eight- to ten-digit national codes for import markets.

Thus, product groups with three different degrees of specialization to date have been selected to analyse competitiveness and identify trade opportunities:

- (a) **traditional:** because of its enormous importance to the countries being studied;
- (b) **incipient:** oriented to strong and very strong markets, and
- (c) **incipient:** where there is evidence of product differentiation for the countries studied.

For these three groups of agrifood products, some indicators for *ex-post* competitiveness are calculated, such as the levels of and trends in market share for the countries studied and their main competitors. Competitor countries are chosen according to two different criteria: for each of the selected agrifood products, countries with the highest market share or strongest growth in market share for the import markets considered are treated as relevant competitors. The observation of levels of and trends in market share for the countries studied versus their main competitors makes it possible to classify the previously selected products as representing either strong or weak points for these countries, depending on whether they are gaining or losing against their competitors.

The next step consists of identifying the extent of trade protection in the import markets under consideration for the agrifood products already classified as strong or weak points, in the case of both the countries studied and their main competitor countries, thus generating a measure for the relative protection these groups of countries face. In this case, trade protection refers solely to tariff barriers imposed by import countries, because other (sanitary and phytosanitary) barriers are, at least in principle, non-discriminatory. The data base used is the Trade Analysis and Information System (TRAINS), developed by the United Nations Conference on Trade and Development

(UNCTAD), which provides disaggregated (to ten digits) *ad valorem* and specific tariff information for import markets and tariff items. The aggregation of these items to reach the SITC levels used in the present study is based on simple averages.¹³

In the case of trade liberalization in the import markets under consideration, the main trade opportunities for the countries studied arise from those products representing strong competitive points for those countries whose protection level is high and whose relative protection is greater than that of their competitors. Similarly, the main challenges are associated with those products for which the countries studied are not clearly the most competitive among all competitors, but do rely on preferential treatment in the import markets under consideration (this protection is relatively minor for the countries studied).

2. The main results of *ex-post* competitiveness and trade protection

Following the analytical methodology described above, the main agrifood products for the countries studied were identified based on the trade specialization indicator. Predictably, this produced a short list of products that account for most of the subregion's comparative advantages. The countries studied were divided into Central American and Caribbean and of the almost 200 categories of agrifood products initially considered, just 13 were selected for Central America¹⁴ and nine for the Caribbean.¹⁵ As per the classification defined above, unroasted coffee, sugar cane, and bananas and plantains can be considered the traditional products of specialization in both regions, while the other items selected form part of the product group where specialization is weak or incipient.

The selected products are relevant not only for the respective subregions, but also for most of the countries that compose them, because of how the methodology for product selection was designed. The products selected represent the largest share of agrifood exports from the two subregions under consideration: in the Central American case, their share is 73%, while in the Caribbean this reaches 65%. In terms of total exports to countries beyond the subregions under consideration, the share of the selected agrifood products is also significant, accounting for 40% in the case of Central America and just over 10% in the Caribbean, given the heavy weight of the oil sector on trade in this last region. These statistics do not include Cuba, Guyana, Haiti and the Dominican Republic in the Caribbean, all countries for which up-to-date trade information is not available.

On the destination of subregional exports, two markets receive most of the trade in selected products: the European Union, which at the end of the 1990s received 34% of Central American and 73% of Caribbean exports of the selected products, and the United States, receiving 49% and 15% respectively. Together, therefore, these destinations accounted for 83% of Central American

¹³ At first glance, the weighted average for the importance of products and countries in bilateral trade would appear to be the best option for calculating aggregate protection. Nonetheless, when the protection is effective, it affects trade levels and, as a result, the weight of countries and products over imports, that is, the weight itself. Because of this, we initially worked with both measures—the weighted average and the simple average—but the comparison between the two showed little difference for the specific cases analysed in this study.

¹⁴ The products selected for Central America were, organized from the highest degree of specialization to the least (the numbers in brackets represent their respective codes in the Standard Industrial Trade Classification (SITC), revision 3: Coffee, not roasted, not decaffeinated (07111), Cane sugar, raw (06111), Bananas (including plantains), fresh or dried (0573), Roots and tubers, except yucca (05483), Shrimps and prawns, frozen (03611), Other crustaceans, frozen (03619), Meat of bovine animals, fresh or chilled (01112), Cane molasses (06151), Cigars, cheroots and cigarillos, containing tobacco (1221), Melons (including watermelons) and papaws (papayas), fresh (05791), Other live plants (including their roots), cuttings and slips; mushroom spawn (29269), Sesame (Sesamum) seeds (2225) and Palm oil, crude (42221).

¹⁵ In the case of the Caribbean, the following products were selected, organized from the highest degree of specialization to the least (the numbers in brackets represent their respective codes in the SITC, revision 3: Cane sugar, raw (06111), Coffee, not roasted, not decaffeinated (07111), Bananas (including plantains), fresh or dried (0573), Rum and tafia (11244), Cigars, cheroots and cigarillos, containing tobacco (1221), Cocoa beans, whole or broken, raw or roasted (0721), Other crustaceans, frozen (03619), Oranges, fresh or dried (05711), Melons (including watermelons) and papaws (papayas), fresh (05791).

and 88% of Caribbean exports of the selected products. The markets that followed in importance were Japan, Canada, Mexico and the rest of Latin America. Given the significant geographic concentration of exports of the selected products, for the purpose of analysing the strength of import demand, we will consider only the markets of the United States and European Union.

In the United States market, total imports of the selected products rose at an annual rate of 4.8% throughout the 1990s, versus less than 2% in the European market. In 2000, this last market saw imports reach almost US\$21 billion, while in the United States this amount reached just over US\$13 billion. Compared to the growth of world agrifood trade in the 1990s, which reached an average annual rate of 2.8%, imports of the selected products performed relatively well in the US market and stagnated in the EU. In both markets, however, a more disaggregated analysis reveals the presence of dynamic, stagnant and shrinking products/markets among the items selected (see table 2).

Table 2

CLASSIFICATION OF SELECTED PRODUCTS BY PERFORMANCE IN IMPORT MARKETS

Specialization	Performance/Growth			
	Very Strong performance (>4.6%)	Strong performance (2.8-4.6%)	Stagnant performance (0-2.8%)	Contracting (<0%)
United States:				
Traditional	-	Unroasted coffee (07111)	Bananas and plantains (0573)	Cane sugar (06111)
Weak/incipient	Tobacco (1221) Bovine meat (01112) Live plants (29269) Oranges (05711) Crustaceans ^a (03619) Roots/tubers (05483) Sesame (2225) Melon/papayas (05791) Shrimp (03611)	Cocoa beans (0721)	Rum and tafia (11244)	Palm oil (42221) Cane molasses (06115)
European Union:				
Traditional	-	Unroasted coffee (07111)	Bananas and plantains (0573)	Cane sugar (06111)
Weak/incipient	Rum and tafia (11244)	Tobacco products (0221) Crustaceans (03619) Melon/papayas (05791) Shrimp (03611) Palm oil (42221) Sesame (2225)	Cocoa beans (0721) Bovine meat (01112)	Live plants (29269) Oranges (05711) Cane molasses (06115) Roots/tubers (05483)

Source: Own calculation based on information from COMERPLAN, Agricultural Unit (ECLAC).

Note: The numbers in brackets refer to the product codes in the Standard Industrial Trade Classification (SITC), revision 3.

^a It should be noted that among shellfish, growth levels for lobster imports classified this as a stagnant product.

Some aspects of import market behaviour deserve special attention. In the first place, with the possible exception of coffee, the items that these Central American and Caribbean countries have traditionally specialized in ended up classified as stagnant or shrinking in the main import countries' markets. The implications of this fact for subregional agriculture are important and closely linked to the heavy weight of traditional products within the economies of the countries studied, combined with the falling trend in international prices for these products, including in this case coffee. Secondly, table 2 shows that at least in the case of the selected agrifood products, the United States market is much more dynamic than the European, receiving most of the items

undergoing incipient specialization for the countries studied in the strongest performing import category. This difference between both markets holds, moreover, in the case of import growth levels for the most dynamic products. In fact, the United States market, with five of the strongest performing imports posted a growth rate in the 1990s of almost 13% per year, versus 4% for the five strongest performing products in the European Union.

The main trends in agrifood demand tend to have a global component that advances along with more general cultural and socioeconomic changes, combined with trends that are more specific to the country or even town where consumption occurs. If we look at long-term behaviour of world trade in agrifoods, we can identify the most general trends in demand in recent decades, among them a rise in the consumption of fruit and other fresh foods, an increase in fish and fowl consumption to the detriment of red meats, a reduction in the consumption of sugar and the use of natural textile fibres, and relatively stagnant demand for cereals and fats. If we look specifically at the import markets that interest us for this study, on the one hand we can confirm most of the trends apparent worldwide and, on the other, we can more closely identify the behaviours peculiar to these markets.

Since our objective is to identify trade opportunities for the countries studied, the products that most interest us are those classified as strong or very strong performers in the selected import markets. In these cases, there is more room for export growth by volume and above all by value, given that strong performers generally tend to achieve higher prices in international markets. In other words, given the historical trend toward falling prices for basic products, including several agricultural commodities, specialization in products with growing international demand could bring higher prices and thus lead to a more competitive performance in external markets.

Aside from the products enjoying robust growth in demand, export countries also expect better prices than their competitors for goods that stand out due to their quality. Product differentiation is an industrial economic concept that arises because consumers have certain preferences for products that may be partially substituted in a single market. Product differentiation can be horizontal or vertical, with the former referring to differences in habits or tastes (for example, colours), while the latter involves differences in product quality, which may coexist given the diversity of consumer preferences and income. The latter case in particular involves a competitive strategy that, when successful, generates segmentation in the original market, creating new sub-markets or niches in which producers can operate as monopolies or oligopolies during a certain period, thus obtaining higher prices for their products than in a commodity market.¹⁶

In this sense, along with specializing in strong performers from the demand perspective, specialization in products that stand out due to their superior quality can also be considered a desirable competitive strategy. In the case of agrifood goods, although traditionally there has not been much room for product differentiation, particularly among unprocessed goods, this situation has tended to change with advances in biotechnology and the valuation of organic crops, among other recent trends in this sector. These advances drive the development of an agriculture that has become both more differentiated and more highly valued, whose output, while still primary and without greater manufacture, tends to move away from the traditional concept of a commodity. Thus, given the strong performances of these new markets, we are interested in identifying the cases in which products from the countries studied can be differentiated from those produced by competitor countries.

In practice, identifying product differentiation is not easy. Generally speaking, it is extremely difficult to define at what point one product stops being the same as another in consumers' eyes. In many cases, this is much more a question of marketing or other subjective factors than technical

¹⁶ Another possibility for differentiation and therefore higher prices is for agricultural produce to reach markets before or after most other suppliers' goods. For the products considered in this study, however, this is not so relevant.

differentiation. Because of all these difficulties, it is common to identify this phenomenon using the price differentials obtained and sustained by a product in a given market, although this methodology is not problem-free either. In fact, the definition of the cut-off point for assuming a price differential indicating product differentiation is rather arbitrary. Even so, we opted for this route in our attempt to analyse more deeply the characteristics of agrifood demand in selected import markets and the resulting opportunities within these markets for trade development beneficial to the countries studied.

As detailed in the methodological section, the indicator that reveals price differentials for products from one country over those of competitor countries is VURI. In this study, this indicator was calculated for selected agrifood products in the markets of the US and the EU, with the export countries being the economies under study, grouped as either Central American or Caribbean.¹⁷ Both markets contain important information that enables us to explore product differentiation in the case of certain goods produced by these Central American and Caribbean countries.

In the American market, Central American products that constantly achieved a higher price than similar products from other competitor countries were frozen shrimp and other crustaceans, the wild taro or *malanga* (a type of tuber), fresh papayas, and unroasted coffee. For the Caribbean countries studied, in the same market, the products that achieved differentiated prices were fresh bananas and plantains, fresh papayas, unroasted coffee, and tobacco products. In the EU market, the products showing the most evidence of differentiation were frozen shrimp, live plants, watermelon, unroasted coffee, and sesame seeds from Central America, along with fresh bananas and plantains, watermelons and melons, and tobacco products from the Caribbean. It is interesting to note that practically all products for which we assumed product differentiation in the case of the countries studied were classified in import markets as strong or very strong performers, according to table 2.

Thus, our final product selection consisted of three traditional items, plus the products in table 2 that classified as strong and very strong performers in every import market; live plants were also included, following the criterion of product differentiation, in the case of the European market. Table 3 provides the final list of selected products by import market, ordered as follows: in the first place, traditional products, followed by those showing incipient specialization organized by import performance during the 1990s. This table summarizes the main results of *ex-post* competitiveness for the countries studied and is complemented by table 4, where the same variables appear for the main competitor countries.

Among traditional products, coffee represented the leading item by value of trade in both the US and the EU markets, followed by bananas and sugar. This same order repeats itself in the case of market performance, with coffee responsible for the highest growth in imports in the past decade, while trade in sugar has fallen off. The countries studied posted very high market shares for bananas and sugar, with the former coming mainly from Central America and the latter from the Caribbean, at least in the European market. In the case of coffee, primarily from Central America, these countries face more competition; nonetheless, among traditional items, this was the subregional product that performed the best.

The case of coffee is interesting because it is a traditional item whose recent performance is based on product differentiation. While the market of coffee as a commodity remains stagnant worldwide, growing at just slightly over 1% per year in the past decade, the specialty coffee market rose eight times more in countries such as the United States and also in Europe.¹⁸ However, several

¹⁷ To minimize the effect of aggregating different products under the same trade item, we used primary information from import markets, using eight-digit codes in the case of the European Union and ten-digit codes for the United States. Sources for trade figures used to calculate the unit value indicator for imports (VURI) were the United States Department of Agriculture (USDA) for the US and European Statistics (EUROSTAT) for the European Union.

¹⁸ Specialty coffees can be differentiated from common coffees at the primary or manufactured level, through their physical or sensory characteristics, as well as cultural practices or final processes. According to the Specialty Coffee Association of America, most specialty coffees can be classified according to five categories: place of origin, flavouring, organic production, roast, or decaffeination.

hindrances prevent producing countries from taking full advantage of the specialty coffee market's performance: this is a small market in terms of volumes; the certification requirements, for example for organic coffee, require the development of institutions that are at present non-existent in these countries; some possibilities for agri-manufacturing differentiation are controlled by large transnationals in the sector, while domestic firms in producing countries have done little or nothing to develop this sort of strategy.

Table 3

EX-POST COMPETITIVENESS OF COUNTRIES STUDIED IN SELECTED IMPORT MARKETS

SITC code	Description	Imports		Central America		Caribbean	
		Value (US\$ thousands)	Growth	Market share	Growth in market share	Market share	Growth in market share
		1998-2000	1990-2000	1998-2000	1990-2000	1998-2000	1990-2000
United States:							
07111	Coffee, not roasted, not decaffeinated	2 470 386	3.8	26.8	2.0	0.6	-11.0
0573	Bananas (including plantains), fresh or dried	1 465 772	1.6	51.7	1.1	0.3	11.4
06111	Cane sugar, raw	621 678	-2.7	23.5	0.4	18.8	0.6
1221	Cigars, cheroots and cigarillos, containing tobacco	310 364	20.7	21.3	-0.5	71.1	1.1
01112	Meat of bovine animals, boneless, fresh or chilled	690 351	14.3	2.9	-20.2	-	-
29269	Live Plants, (including their roots), cuttings and slips; mushroom spawn	260 639	12.8	10.4	-5.1	-	-
05711	Oranges, fresh or dried	61 577	11.2	-	-	2.0	-20.8
05483	Roots and tubers, except yucca	65 571	8.0	44.7	4.8	40.3	-2.2
2225	Sesame seeds	2 136 103	7.8	1.1	-4.1	-	-
05791	Melons (including watermelons) and papaws (papayas)	371 576	7.4	40.5	0.3	4.7	9.0
03611	Shrimps and prawns, frozen	2 839 510	4.8	8.5	1.9	-	-
0721	Cocoa beans	586 267	3.0	-	-	6.1	-5.4
European Union:							
07111	Coffee, not roasted, not decaffeinated	4 920 159	3.4	18.3	3.07	0.8	-1.83
0573	Bananas (including plantains), fresh or dried	2 399 549	2.3	38.6	-0.59	4.9	2.73
06111	Cane sugar, raw	932 932	-1.3	0.2	-0.52	33.1	1.43
11244	Rum and tafia	338 479	7.4	-	-	24.4	-5.60
1221	Cigars, cheroots and cigarillos, containing tobacco	110 548	4.4	6.9	14.51	84.7	-0.28
03619	Other crustaceans, frozen	209 674	3.6	3.1	8.60	28.6	9.95
03611	Shrimps and prawns, frozen	1 905 974	3.3	3.1	8.31	-	-
05791	Melons (including watermelons) and papaws (papayas)	208 269	3.3	32.1	17.31	1.6	1.13
2225	Sesame seeds	244 088	2.9	3.3	-14.49	-	-
42221	Palm oil, crude	391 653	3.0	0.4	-11.95	-	-
29269	Live Plants (including their roots), cuttings and slips; mushroom spawn	187 742	-0.3	29.4	0.19	-	-

Source: Own calculations based on information from COMERPLAN, Agricultural Unit, ECLAC.

Note: Codes correspond to the Standard Industrial Trade Classification (SITC), revision 3.

The competition that these countries face in their traditional product markets arises on one hand from the great historical exporters of these products and, on the other, from incipient exporters enjoying high growth in their market shares. Among the first group of competitor countries, market shares have developed relatively steadily and have even in some cases fallen significantly, as occurred with Colombian coffee in the EU. In terms of incipient competitors, growth in these countries' market shares tends to be much higher than the rates achieved by the countries studied.

It is necessary to underline, however, that in the case of sugar, both in the EU and the US, and also for bananas in the EU, these markets are managed using quotas or tariff quotas. These quotas specify a favourable tariff for imports under quota from each export country, while imports over this limit are subject to a much higher, generally prohibitive, tariff. Thus, the market shares of the countries studied and competitor countries in these products reflect the structure of tariff quotas in effect in import markets rather than the competitiveness of these countries.

Table 4
COMPETITIVENESS OF THE MAIN COMPETITORS IN SELECTED MARKETS

SITC code	Description	Competitor N° 1			Competitor N° 2			Competitor N° 3			Competitor N° 4		
		Country	Share 1998-2000	Growth in share 1990-2000	Country	Share 1998-2000	Growth in share 1990-2000	Country	Share 1998-2000	Growth in share 1990-2000	Country	Share 1998-2000	Growth in share 1990-2000
United States:													
07111	Coffee, not roasted, not decaffeinated	Colombia	19.1	-0.8	Mexico	15.9	-0.2	India	1.3	9.1	Indonesia	3.9	4.4
0573	Bananas and plantains, fresh or dry	Ecuador	26.6	-1.2	Colombia	16.5	0.8						
06111	Cane sugar, raw	Brazil	12.6	1.0	Philippines	10.3	-2.3	Mexico	3.0	25.6	South Africa	3.4	2.9
1221	Cigars, cheroots and cigarillos, containing tobacco , containing tobacco	Mexico	2.1	-12.7	Dominica	1.5	-						
01112	Meat Of Bovine Animals, Boneless, Fresh Or Chilled	Canada	88.1	3.7	Australia	3.2	20.3						
29269	Live Plants (including their roots), cuttings and slips; mushroom spawn	Canada	71.0	2.3	Mexico	2.7	1.7	Asia ^b	3.7	15.1	Israel	1.1	4.7
05711	Oranges, fresh or dried	Australia	53.9	15.7	Mexico	22.2	-3.4						
05483	Roots and tubers, except yucca	Brazil	2.6	-2.0	Fiji	2.3	11.0						
2225	Sesame seeds	Mexico	32.6	6.1	Canada	9.2	-5.0	Ireland	4.7	4.4	UK	5.7	3.6
05791	Melons (including watermelons) and papaws (papayas)	Mexico	52.9	-0.7	Brazil	1.1	7.9						
03611	Shrimps and prawns, frozen	Thailand	29.2	5.1	Ecuador	14.1	-3.0	India	6.1	4.8	Mexico	13.8	3.7
0721	Cocoa beans	Ivory Coast	48.2	6.3	Indonesia	29.0	6.4						
European Union:													
07111	Coffee, not roasted, not decaffeinated	Brazil	23.5	1.3	Colombia	15.0	-5.5	Vietnam	6.7	22.6	Peru	2.5	14.7
0573	Bananas and plantains, fresh or dry	Colombia	18.6	5.1	Ecuador	18.4	1.9	Venezuela	1.1	90.4	Cameroon	6.6	7.1
06111	Cane sugar, raw	Mauritius Islands	31.1	0.2	Fiji	12.3	1.8	Brazil	1.9	4.7	Zimbabwe	3.6	4.6
11244	Rum and tafia	Bahamas	58.4	11.2	Venezuela	3.6	12.6	USA	2.9	7.2			
1221	Cigars, cheroots and cigarillos, containing tobacco	USA	4.3	0.6									
03619	Other crustaceans, frozen	Bahamas	13.1	-0.1	Thailand	2.3	-3.4						
03611	Shrimps and prawns, frozen	Ecuador	9.8	-1.3	Thailand	7.0	-1.9	Iran	1.2	19.8	Malaysia	3.7	9.1
05791	Melons (including watermelons) and papaws (papayas)	Brazil	32.1	0.1	Israel	14.9	-0.5	Morocco	7.6	17.0			
2225	Sesame seeds	Czech Republic	19.3	-	Mexico	19.0	0.5	Slovenia	1.4	26.9	Venezuela	1.2	12.7
29269	Live Plants (including their roots), cuttings and slips; mushroom spawn	Israel	11.7	1.1	Poland	8.0	4.5	Malaysia	1.1	14.7	South Africa	2.4	7.1
42221	Palm oil, crude	Indonesia	45.0	-2.5	Papua New Guinea	30.1	5.8	Colombia	4.1	45.7	Ghana	3.2	27.3

Source: Own calculations based on information from COMERPLAN, Agricultural Unit, ECLAC.

^a Competitors 1 and 2 were selected using market share criteria; competitors 3 and 4 based on growth in market share during the 1990s.

^b Not specified elsewhere.

With the Uruguay Round, it was agreed that non-tariff restrictions on trade would be translated into tariffs in a process known as “tariffication” of trade barriers, which give rise to tariff quotas. Nonetheless, in some cases it is recognized that these quotas continue to have effects on trade that are comparable to non-tariff restrictions, particularly when the over-quota tariff is extremely high. In the EU market, for example, the Caribbean countries face no tariff restrictions on sugar or bananas while exporting under quota; beyond this, the specific tariff for the countries of Africa, the Caribbean and the Pacific (ACP) is 33.9 euros/100kg for sugar and 508 euros/1000kg for bananas. The impact these tariff quotas have on import structure is enormous, making it impossible to analyse competitiveness using trends in market shares.¹⁹ In such controlled markets, it is not possible to speak of trade opportunities, unless the proposal is to eliminate quotas, as is the case with the FTAA. Even so, falling sugar consumption is a trend in the world agrifood market, thus limiting the possibilities for expanding exports to the displacement of other competitors. In the case of bananas in the EU, the prospects are somewhat more encouraging on the demand side, although a possible elimination of quotas would significantly hurt Caribbean producers.

In the case of unroasted coffee, where there are no quotas or other tariff or non-tariff barriers in the import markets under consideration, it is possible to treat the relative position of the countries studied and trends as the end result of their competitive advantages and disadvantages. With regard to more traditional competitors, coffee produced by Central American countries enjoys competitive advantages in both the US and the EU markets, unlike the Caribbean countries, which have seen their share of both markets, drop sharply. Similarly, incipient competitors present rather higher growth rates than the countries studied, especially in the European market, but in general their market shares remain very small, except for Vietnam. This last country recently began to export coffee and its share of the world market only became significant in the second half of the 1990s. Today it is the second largest coffee producer and exporter after Brazil. Its strategy has been based mainly on low prices for a product oriented to the needs of the instant coffee industry.

The competition between Vietnamese and Central American coffees, with the latter consisting of other, better quality varieties, is not very direct, at least in those market segments where quality matters. Nonetheless, in the coffee commodity market, the price differential compared to Vietnamese coffee can be decisive. In effect, this price differential for Central American coffees reflects on one hand, Vietnam’s arrival in international markets with a price set at about 60% of the average for its competitors. On the other hand, it also reflects a marked tendency among certain market segments to value better quality coffee, especially those linked to coffee houses, which have grown enormously in the United States and other markets with large purchasing power. This important trend in demand —the export of specialty coffees— appears to be an opportunity for the countries studied, although most of the coffee sold around the world will continue to be of the commodity type and, in this case, productivity gains are essential to boost competitiveness.

In the banana market in the United States, there are no tariff barriers for the countries benefiting from the GSP or the Caribbean Basin Initiative (CBI), which include all the countries studied along with their main competitors, Ecuador and Colombia. Non-tariff barriers, which include phytosanitary controls, affect export countries horizontally. As a result, we can say that these countries face a relatively similar protection level in the market in question. Central American countries’ performance in this market has been relatively stable, while Caribbean countries’ performance has varied considerably, although starting from very low market shares. The main

¹⁹ An interesting indicator of the decisive impact that tariff quotas have on trade is provided by the differences in export countries’ share under quota and under other mechanisms that permit tariff-free access to reexport processed products, for example. According to Skully (1998), in the American sugar market, some Central American countries such as Guatemala, Costa Rica and Honduras have a quota of less than 5% of annual imports under tariff quotas, but under programmes that permit tariff-free import beyond these countries’ quotas (quota exemption) they achieve a share many times higher, 40% in the case of Guatemala. Meanwhile, countries with high quotas, such as Brazil and the Philippines, practically do not participate in the market under any other mechanism. Some authors affirm (see Skully, 1998) that the market shares in effect under the quota exemption programme are those that should prevail in the case of liberalizing the American sugar market.

competing countries hold market shares that vary only slightly, thus establishing some stability, which to some degree is reflected in sluggish demand.

Where products showing signs of weak or incipient specialization are concerned, it is possible to differentiate between those markets in which the countries studied show evidence of competitive advantages, because their market share has been rising more quickly than that of their main competitors, and markets where these countries are clearly losing ground. It is important to note that given the selection carried out previously, all incipient products presented in tables 3 and 4 represent markets of potential interest to the countries studied, given their strong performances and/or their potential for product differentiation. Thus, significant increases in market shares for these countries can be identified as strong points in terms of their agrifood competitiveness, while the markets where they are consistently losing their share, despite strongly performing demand, are considered weak points or lost opportunities.

Among the products where specialization is weak or incipient, the countries studied hold dominant market shares for some items, as is the case with tobacco products in the US and the EU and roots and tubers (except yucca) in the United States. In these markets, competitor country market shares tend to be very small and even when they are exhibiting high growth rates, it is unlikely that they pose a threat to the countries studied. In these cases, the main competition occurs internally, that is among the countries included in this study. In fact, in the case of the American market for tobacco products, the rise in market share experienced by the Dominican Republic was at the cost of Honduras and Jamaica. In the European market, Cuba is the main exporter of tobacco products and its share has been declining, while the Dominican Republic, Honduras and Nicaragua are performing rather well. In roots and tubers, among the main suppliers, Costa Rica has increased its market share while Jamaica and the Dominican Republic have seen theirs decline. Among the subregions, the Caribbean has performed better in the tobacco market in the United States, at the expense of Central America, while the latter has enjoyed better results in the United States, with its roots and tubers, and in Europe, with tobacco products, to the detriment of the Caribbean countries. It should be noted that under the CBI, the Central American and Caribbean countries enjoy free access to the American market for tobacco products, roots and tubers (except yucca), which means that in these cases countries' relative positions reflect their competitiveness in a free market. In the EU, the ACP countries and those covered by the Generalized System of Preferences (GSP), that is, incentives to fight drug production and trafficking, also face a zero tariff in the tobacco product market. Thus, all the countries studied here are included among those with free access, except Cuba, which must pay an *ad valorem* tariff of 9.1% (GSP).

In the markets where the countries studied are not the dominant exporters, competition comes from countries in other regions (see again table 3). In the American market, Canada and Latin American countries, especially Mexico, are particularly active, although several Asian countries are also very strong competitors. In the EU, there is more balance between competitors from Latin America and other regions, both for major exports and those that are performing most strongly.

For the Central American and Caribbean countries studied, incipient, rather than dominant, export products performed negatively on the American market during the 1990s. Thus, Central America lost market share in bovine meat, live plants and sesame seeds, with melons and papayas, and shrimp remaining relatively stable. In the case of the Caribbean, losses were clear for oranges and cocoa, with important gains made only by melons and papayas. In most of these markets, the main competing countries have achieved not only larger market shares but also some of the highest growth rates. This is the case with Thailand in the case of shrimp, the Ivory Coast and Indonesia for cocoa, Australia for bovine meat and oranges, and Mexico for sesame seeds. Moreover, except for melons and papayas, in every other case the combined performance of the two main competing countries has been better than that of the countries studied. Thus, the dynamics of competition in these markets reveal that large export countries are consolidating their positions and taking advantage of growing demand to fend off more lightweight competitors, such as the countries studied here.

In the European market, the countries studied have mixed very positive performances—for example in melons and papayas, shrimp and other crustaceans in the case of Central America and other crustaceans in the case of the Caribbean—with negative results, for example in sesame and palm oil (Central America) and rum and tafia (Caribbean). In the case of melons and papayas, the Central American countries have driven up their market share more than any other competitor. In shrimp and other crustaceans, the countries studied have outperformed their main competitors (Ecuador, Thailand and the Bahamas), but done less well than other exporters with little presence in the European market but very strong performances, such as Malaysia and Iran. In live plants, sesame seeds and palm oil, the Central American countries have lost some ground to their main competitors, but above all to incipient competitors who have demonstrated enormous potential.

When identifying these countries' strong points, such as the markets where they are outperforming their main competitors, we find that their main competitive advantages lie in melons and papayas and other crustaceans (considering only lobsters). Similarly, their main weak points or lost opportunities appear when their market shares have shrunk at a time when their main competitors have been performing well. Finally, intermediate situations occur where the countries studied show some growth in market share, but less than that of at least some of their main competitors (see table 5).

Table 5

STRONG POINTS, LOST OPPORTUNITIES AND INTERMEDIATE SITUATIONS FOR PRODUCTS SHOWING INCIPIENT SPECIALIZATION; PREFERENTIAL TARIFFS FOR THE COUNTRIES STUDIED AND THEIR MAIN COMPETITORS IN THE UNITED STATES OF AMERICA (USA) AND THE EUROPEAN UNION (EU) MARKETS

Subregion	Importing region	SITC code	Product	Preference subregional	Competitor 1		Competitor 2		Competitor 3		Competitor 4	
					Country	Preference	Country	Preference	Country	Preference	Country	Preference
Strong points												
Central America (+) Central America (+) Caribbean (+) Caribbean (+)	EU	05791	Melons and papayas	GSPE	Brazil (=)	GSP	Israel (-)	Israel	Morocco (+)	Morocco		
	EU	03619	Other crustaceans	GSPE	Bahamas (=)	ACP	Thailand (-)	MFN				
	USA	05791	Melons and papayas	CBI	Mexico (-)	NAFTA	Brazil (+)	GSP				
	EU	03619	Other crustaceans	ACP	Bahamas (=)	ACP	Thailand (-)	MFN				
Intermediate Situations												
Central America (+) Central America (=) Central America (+) Central America (=) Caribbean (+)	USA	03611	Frozen shrimp	MFN	Thailand (+)	MFN	Ecuador (-)	MFN	India (+)	MFN	Mexico (+)	MFN
	USA	05791	Melons and papayas	CBI	Mexico (-)	NAFTA	Brazil (+)	GSP				
	EU	03611	Frozen shrimp	GSPE	Ecuador (-)	GSPE	Thailand (-)	MFN	Iran (+)	GSP	Malaysia (+)	GSP
	EU	29269	Live plants	GSPE	Israel (+)	ISRAEL	Poland (+)	POLAND	Malaysia (+)	GSP	South Africa	GSP
	EU	05791	Melons and papayas	ACP	Brazil (=)	GSP	Israel (-)	ISRAEL	Morocco (+)	Morocco		
Lost opportunities												
Central America (-) Central America (-) Central America (-) Central America (-) Central America (-) Caribbean (-) Caribbean (-) Caribbean (-)	USA	01112	Bovine meat	CBI	Canada (+)	NAFTA	Australia (+)	MFN				
	USA	29269	Live plants	CBI	Canada (+)	NAFTA	Mexico (+)	NAFTA	Israel (+)	TLC Israel		
	USA	2225	Sesame seeds	MFN	Mexico (+)	MFN	Canada (-)	MFN	Ireland (+)	MFN	United Kingdom (+)	MFN
	EU	2225	Sesame seeds	MFN	Mexico (=)	MFN	Slovenia (+)	MFN	Venezuela (+)	MFN		
	EU	42221	Crude palm oil	SGPE	Indonesia (-)	MFN	PN.Guinea(+)	ACP	Colombia (+)	GSPE	Ghana (+)	ACP
	USA	0721	Cocoa beans	MFN	Ivory Coast(+)	MFN	Indonesia (+)	MFN				
	USA	05711	Oranges	CBI	Australia (+)	MFN	Mexico (-)	NAFTA				
	EU	11244	Rum and tafia	ACP	Bahamas (+)	ACP	Venezuela (+)	MFN	USA (+)	MFN		

Source: Own elaboration based on information from COMERPLAN and the Trade Analysis and Information System (TRAINS).

Note: The signs within brackets indicate trends in market shares during the 1990s.

For each of these product categories, it is worth examining the status of countries studied and their competitors in terms of access to import markets, in order to identify possible differences in relative protection, which will be eliminated if some of the trade liberalization measures currently under discussion are implemented. The countries studied and their main competitors, presented in table 5, participate under different schemes of preferential tariffs, ranging from the most favoured nation clause for WTO member countries to free access under free trade agreements (for example, the North American Free Trade Agreement (NAFTA)). The countries studied, as mentioned above, are covered by unilateral preferences granted by the American market under the aegis of the CBI and, in Europe, under the Cotonou Agreement for the ACP countries and the GSP. Similarly, their South American competitors are also covered unilaterally under the respective GSP and other special incentives programmes, for example the anti-drug war (in the case of the Andean countries). Table 5 summarizes the current status of countries studied and their main competitors under the tariff preference schemes that affect them in the American and European markets. It should be noted, however, that these systems involve exceptions both in terms of countries and products, especially in the agrifood sector.

In the first place, it is worth identifying, among the products presented in table 5, those that face tariff-free markets without, of course, any kind of preference. In the case of the EU, this is the situation affecting sesame seeds, and in the United States, frozen shrimp, sesame seeds and cocoa beans. In these markets, all the countries studied, along with their competitors, are classified in the MFN category, precisely because there is no room for preferences in the free market. In these cases, countries' relative position reflects their competitive advantages with no interference from trade protection. For the remaining products, the countries studied and their competitors receive different treatment, reflected in differential tariffs, as presented in table 6.

Table 6
TARIFF STRUCTURE IN THE UNITED STATES AND
THE EUROPEAN UNION FOR THE SELECTED AGRIFOOD PRODUCTS
(Percentage)

SITC code	Description	Tariff Structure						
United States:		MFN	GSP	CBI	Canada	Mexico	FTA-Israel	Andean countries
01112	Bovine meat	8.0	8.0	3.8	0	0	3.8	3.8
05711	Oranges	2.3	2.3	0	0	0	0	0
05791	Melons and papayas	12.8	6.4	0	0	3.6	0	0
29269	Live plants	1.9	0.1	0	0	0	0	0
European Union:		MFN	GSP	GSPE	ACP	Poland	Morocco	Israel
03611	Frozen shrimp	^a 13.2	^a 7.0	^a 3.6	0	^a 8.8	0	^a 13.2
03619	Other crustaceans	^a 10.1	^a 4.3	0	0	^a 7.1	0	^a 10.1
05791	Melons and papayas	5.9	3.5	0	0	0	1.8	^a 4.4
11244	Rum and tafia ^b	35.4	35.4	35.4	0	35.4	0	0
29269	Live plants	6.3	3.3	0	0	0	0.3	0
42221	Crude palm oil	1.9	0	0	0	0	0	1.9

Source: Integrated tariff of the European Communities (TARIC) and the United States International Trade Commission.

Note: Tariffs calculated using simple averages for tariff lines, for 2002. Includes *ad valorem* duties and *ad valorem* equivalent specific duties.

^a Tariff quota exists, with a preferential tariff, in at least one tariff line.

^b Tariffs refer to the maximum for this product.

Generally speaking, the European market is more protected than the American for the selected agrifood products, especially taking into account the preferential tariffs applied in these cases. In the United States, the selected agrifood products from the countries studied already enjoy free access, as do the products from other members of NAFTA, Israel and the Andean countries. In the EU, while the Caribbean countries have free access for the selected products, the Central American nations still face moderate protection affecting their shrimp, and similar protection in the

MFN category, which affects rum and tafia, a product for which only the ACP countries enjoy preferential access.

The products identified as competitive strong points for agrifoods from the countries studied enjoy better access to the EU market than their main competitors, while in the American market conditions are the same for both groups of countries. Liberalization in the European market, affecting melons and papayas or other crustaceans, would therefore benefit competitors such as Brazil, Israel and Thailand. Nonetheless, given current conditions the countries studied appear to be more competitive, a situation that would be less clear after liberalization. Meanwhile, in the American market for melons and papayas, none of the main competitors would benefit from market liberalization, but it is conceivable that some producing country, currently without preferential access, could begin to export to this market after liberalization.

With regard to intermediate situations, conditions resemble those for strong points, that is, in the American market, the countries studied and their main competitors currently enjoy similar conditions of access and only third countries would benefit from liberalization. Meanwhile, in the EU market, the countries studied enjoy better access than most of their competitors for their frozen shrimp exports, live plants, and melons and papayas. In no case does a competitor face lower tariffs than the countries studied.

In terms of lost opportunities, generally speaking access conditions to import markets are rather similar for the countries studied and their main competitors. It is possible, however, to identify some situations in which even with relatively favourable protection levels, these countries are losing ground to competitors. For Central America, this is the case with bovine meat and, for the Caribbean, oranges, in the American market and with regard to a competitor such as Australia, whose products currently enter the United States under the MFN tariff.

3. Initial conclusions

Based on the analysis of competitiveness and conditions of access to import markets carried out in this chapter, it is possible to reach the following conclusions:

a) Two of the three main traditional export products from the subregions studied —sugar and bananas— correspond to markets that are among the most protected in international agrifood trade. In these markets, “tarification” as applied since the Uruguay Round has remained largely a formality, given that access to market share continues to be defined by quotas or tariff quotas. In this sense, the competitiveness of export countries is only very marginally reflected in their respective market shares. These are markets that will be difficult to liberalize in the short or medium terms, even within bilateral or plurilateral agreements.

b) The prospects for coffee, another traditional export product from Central America and the Caribbean, vary depending on the market segment. There has clearly been a trend toward more added value in the case of quality, with strong growth in the consumption of specialty coffees in the main import markets. In this sense, the variety produced in the region (Arabica, other mild) is the one experiencing the most growth in demand. Nonetheless, supply has outrun demand in the commodity coffee market, which is and will continue to be the largest market, where prices have plunged, and with no likelihood of a turnaround in the short term. Adjusting supply to demand should occur through less efficient producers dropping out of the market, thus underlining the need to increase productivity levels.

c) In the case of some products showing weak or incipient specialization, such as tobacco and roots and tubers, the countries studied hold dominant market shares in the import markets studied. In these cases, competition is occurring directly among the Central American and Caribbean countries studied. Market access conditions tend to be similar among these countries,

except for Cuba, which still does not enjoy the same preferences as the other countries in the subregion, and which could benefit if these conditions were to be levelled.

d) Among products showing incipient specialization, where competition comes mainly from countries outside the subregion, there are several different competitive situations; in some cases, the countries studied enjoy competitive advantages and in other cases, disadvantages. Intermediate situations also occur, in which the market shares of the countries studied are exhibiting growth rates that are positive but lower than some of their main competitors. Generally speaking, nonetheless, the countries studied have been losing ground to their competitors in most of the products considered, particularly in the American market, which is the most dynamic among the import countries considered.

e) Regarding market access conditions, the countries studied enjoy competitive advantages over their main competitors in at least one completely liberalized agrifood market, which is frozen shrimp in the United States. In this case, the countries studied have expanded their market shares more than their main competitors without preferential tariffs.

f) Especially in the EU market, preferential tariffs guaranteed to the countries studied may be positively affecting their competitive performance compared to their main competitors. In the European market for melons and papayas, frozen shrimp and live plants, the countries studied have outperformed some of their competitors who face less favourable conditions of access. Nonetheless, it would be necessary to study this further to determine the impact of these preferences on relative market shares and trends.

g) For American imports of the selected agrifood products, tariff protection is not significant, at least for the export countries included in some kind of preferential system. The exception is sugar, whose market is controlled by tariff quotas. As a result, except for this product, the creation of the FTAA should have a minimal impact on access to the American market in the case of the agrifood products analysed in this study. This is because the countries creating this block already have free access for practically all the products analysed, which correspond to the most important export items for the subregions studied.

h) Market liberalization in Europe for the products analysed should have much more impact on the access enjoyed by the countries studied as compared to their main competitors. Even if we exclude the banana and sugar markets, which may be opened up more slowly, free trade agreements between the EU and important South American countries competing against the countries studied, such as Brazil and the Andean countries, could negatively affect the market shares currently held by the countries studied.

i) Trade negotiations will have to deal with several issues beyond tariff reduction, including in particular: technical barriers to trade (quality, phytosanitary, packaging, labelling, etc.) price control measures (antidumping and countervailing duties) and domestic support policies (production and export subsidies). In some cases, these measures represent more effective protection against trade than tariff barriers themselves. Moreover, internal support policies also affect international agrifood markets, depressing international prices and undermining other countries' competitiveness. These issues have become increasingly important in trade negotiations, both within the WTO and in other regional integration and free trade agreements. Nonetheless, the results in terms of reducing the restrictions imposed by these barriers have been limited.

j) One of the main unknowns regarding the possible results of trade liberalization is how well developing countries, including the countries studied, will be able to take full advantage of the opportunities that market liberalization offers in developed countries. This is a challenge in terms of adapting local supply to requirements in terms of quality and buyers' consumption habits in these countries.

k) Finally, the scope and limitations of the analysis for *ex-post* competitiveness carried out here raises the importance of conducting studies of systemic competitiveness, which take into consideration all the dimensions of the issue, from the aspects involved in primary production, through industrialization and commercialization, and considering the links between the different segments of the chain. Agrifood products that can be identified as the main candidates for this type of analysis, given their crucial importance to the economies studied and the challenge that trade liberalization poses, would be the following: the three products in which the subregion has traditionally specialized (sugar, bananas and coffee), given their ongoing importance to these economies; the main strong points in terms of *ex-post* competitiveness (melons, papayas and crustaceans, except shrimp), to identify possibilities for improving the systemic competitiveness of the countries studied in these markets; and the main lost opportunities (bovine meat and sesame seeds for Central America; oranges and cocoa beans for the Caribbean), to identify existing problems and how to correct them.

B. Some aspects of *ex-ante* competitiveness

1. Methodology

We consider it important to contribute to this discussion some elements related to *ex-ante* competitiveness, which can help to explain the performance of the countries studied in the markets considered. Labour productivity in the agrifood sector is expressed as the value of sectoral production per worker (agricultural labour force) expressed in an internationally comparable monetary unit. This is a basic indicator for *ex-ante* competitiveness that reflects the technical advances and rising levels of wellbeing in the sector. In this study, this indicator was calculated for the countries studied both individually and grouped within the subregion to which they belong. Other indicators for *ex-ante* competitiveness refer to the physical productivity of the land (tons of produce per hectare of land harvested) and producers' relative prices. For both the value of production used in the calculation of sectoral productivity and the producers' relative prices a rate for converting amounts in the domestic currency to an international monetary unit is necessary.

For this purpose, this study used as its conversion rate the unit value ratio (*razón de valores unitarios*, *RVU*), which represents the rate to be applied to the value of a basket of goods produced in one country and expressed in the domestic currency, in order to reach the value of the same basket produced in another country. Two methods for calculating RVU were adopted in this study, one applied to sectoral production values, known as the Elteto-Koves-Szulc (EKS) and the other the calculation for relative prices per product, known as the Geary-Khamis (GK) method. The RVU using the GK method is the ratio for the value of a product at local prices over the value of the same product at international prices. International prices are defined as the ratio of the total value of the product *i* converted into a common monetary unit using the respective RVU over the total quantity of good *i*. That is:

$$RVU_j = \frac{\sum_{i=1}^N P_{ij} q_{ij}}{\sum_{i=1}^N P_i^* q_{ij}}$$

where the numerator represents the total value of all the quantities produced by country *j*, expressed in the domestic currency of country *j*, and the denominator represents the value of the basket of goods from country *j* expressed at international prices. Likewise, the international price for product *i* is:

$$p_i^* = \frac{\sum_{j=1}^M \left(\frac{p_{ij} q_{ij}}{RVU_j} \right)}{\sum_{j=1}^M q_{ij}}$$

where the denominator is the total quantity of good i in our sample of countries (the M countries). The numerator is the total value of the i -nth product for all countries, once the value for each country ($p_{ij} \cdot q_{ij}$) has been converted to a common monetary unit, using the corresponding RVU. These equations make it possible to iteratively develop a system of $(M+N)$ equations where $(M+N)$ is unknown, whose solution is unique if all unknowns are set at an arbitrary value, that is if a numerary currency is used that could, for example, be the pound sterling, the US dollar or the French franc. This version of the RVU is considered the most appropriate for computing relative prices for products, because it is transitive and additive, making it easy to aggregate products under items or subsectors.

Similarly, using the EKS method, the RVU is a rate of exchange inspired by the Fischer index, but a multilateral version that permits transitive comparisons using more than two countries. This is a geometric mean for a certain quantity K of Fischer index ratios, as follows.

$$EKS_{AB} = \left(\prod_{k=1}^K \frac{F_k}{F_k} \right)^{1/K}$$

Where:

$$\left[\left(\frac{\sum_i q_{iA} p_{iB}}{\sum_i q_{iB} p_{iB}} \right) \left(\frac{\sum_i q_{iB} p_{iB}}{\sum_i q_{iA} p_{iB}} \right) \right]^{0.5}$$

$$F_{AB} =$$

Thus, based on calculating the RVU in its two versions, we can obtain both the labour productivity indicator and relative production prices. In the first case, we have:

$$ProdL_{ik} = \frac{\left(\frac{Q_{ik}}{RVU_{ik}} \right)}{L_{ik}}$$

where i corresponds to a country studied, k is a sector (in this case agriculture), Q_{ik} is the value of sectoral production expressed in the domestic currency, RVU_{ik} is country's i 's EKS RVU in sector k and L_{ik} is country i 's agricultural labour force.

For the comparable production price indicator, this reveals producers' ability to sell their goods at prices that are lower than those of their competitors. The price level for a country's production is determined at the international level by the real production price and the nominal exchange rate in effect at the time. The former is captured using the RVU, so that the ratio between

the RVU and the nominal exchange rate reveals whether a good produced by one country is more or less expensive than the same good produced by a reference country.

The three indicators for *ex-ante* competitiveness computed here —sectoral labour productivity, land productivity per product, and the relative price also per product are partial measures, in the sense that they do not reflect all the factors affecting countries' potential competitiveness. Nonetheless, they do contribute some interesting analytical elements to the discussion, helping us to understand how well the countries studied performed in international agrifood markets.

2. Results

Several studies of agricultural productivity, including this one, confirm that countries attempt to expand production by raising the yields for the factor that tends to be scarcest or of the lowest quality. From this point of view, countries with abundant land exhibit significant labour productivity indices (United States, Canada, Argentina, etc). In contrast, countries with abundant labour have increased land yields by incorporating irrigation technology and the intensive use of fertilizers, to push their agricultural limits. This is the case of the countries studied, especially those from the Caribbean.

In this study, we have calculated labour productivity and land productivity in the agricultural sector for the set of countries studied, and also for the blocks formed by those competitors that are relevant in the United States and European Union markets. The block of competitor countries in the US market consists of eight South American countries plus Mexico and Canada, and in the case of the relevant competitors in the EU market these consist of a group of 17 ACP countries, 12 countries favoured by the GSP, and six European economies with significant trade relations with the EU. The United States is included as a country of reference.

The 60 countries in this sample reveal considerable differences in their state of development, as they include some very wealthy countries (United States and Canada), others with mid-range income, and others that are very poor. This wide range in development levels is also reflected in the countries' agricultural sectors. Finally, the result of an analysis of 1995 productivity levels for each block, revealed the following:

In the countries of Latin America, an average labour productivity is 2.6 times greater than that of the countries studied, while the gap with Canada is abysmal, given that labour productivity in the Central American and Caribbean countries studied is barely 3.5% that of Canada's, although it should be pointed out that this is the country with the highest sectoral labour productivity of the 60 countries included in this sample, followed by the United States (see table 7). Disaggregating the block into Central American and Caribbean countries, the former have a slightly higher labour productivity than the latter.

After analysing the blocks, we ranked countries according to their labour productivity²⁰ using the United States as our base at 100. The ranking is headed by Canada, with an index of 105, followed by the United States. In this ranking, none of the countries studied reach 20% of the

²⁰ In terms of labour productivity in Latin America, this ranking is similar to that obtained by calculating productivity using data from ECLAC's agricultural GDP data. Nonetheless, the advantage of calculating productivity using methodologies based on unit value ratios (RVU) lies in the fact that this instrument provides a value that is closest to the *true* value of agricultural production in economies, for the following reasons:

- a) ECLAC's figures for agricultural GDP actually aggregate data for agriculture, hunting, forestry and fishery; in contrast, the RVU methodology used in this study only considers a basket of 184 products, which includes the agricultural and livestock items most relevant to the economies studied. Thus, forestry and fishery activities are excluded from the value of agricultural production.
- b) ECLAC's agricultural GDP figures are set at constant 1995 US dollars, for which an estimated nominal exchange rate (NER) is used, which is not the one actually affecting agriculture, but rather a general figure set for each economy overall. Thus, in some cases this NER may over- or under-estimate the *true* exchange rate affecting agriculture, that is, the RVU. Thus, when the NER overestimates the RVU, the value of production is under-valued, whereas when the NER is underestimated the value of production will be over-valued. In some cases, these over- or under-estimations can be significant, especially for some countries outside the region.

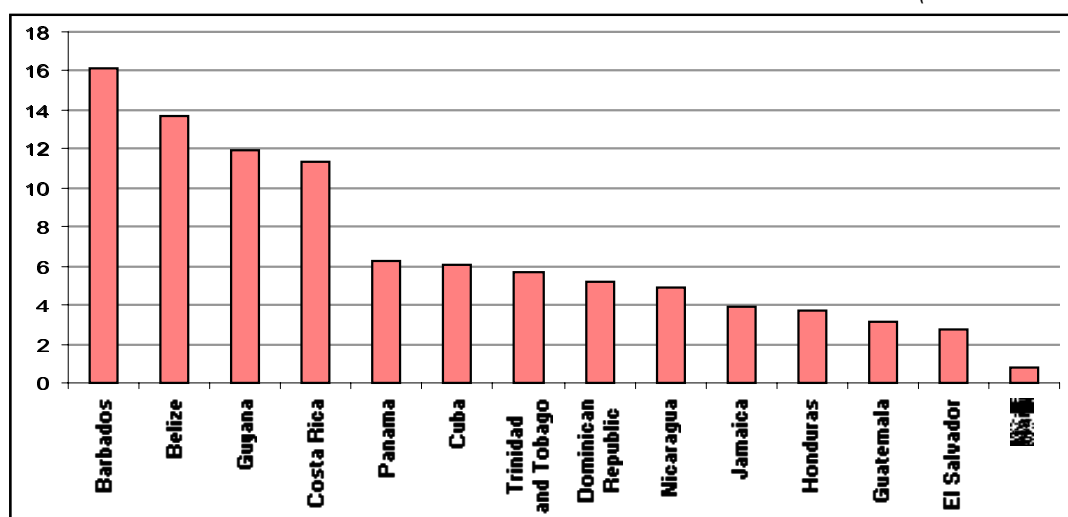
productivity in the United States, and there are enormous differences among them. In the 10 to 20% range of the ranking we find Barbados, Belize, Guyana and Costa Rica, while in the 5 to 10% range we find Panama, Cuba, Trinidad and Tobago and the Dominican Republic, with Nicaragua, Jamaica, Honduras, Guatemala and El Salvador in the 1 to 5% range. Undoubtedly, of all the countries studied the one lagging furthest behind is Haiti, whose labour productivity is barely 0.8% of labour productivity in the United States. The productivity ranking for the countries studied is shown in figure 2.

Table 7
AGRICULTURE SECTOR PERFORMANCE
IN 1995 FOR BLOCKS AND MARKETS EXAMINED

Region	Value of production	Labour force	Land used for agriculture	Productivity	
				Of labour	Of land
	(US\$ million EKS)	(thousands of people)	(thousands of hectares)	(\$US EKS per worker)	(\$US EKS per hectare)
Central America	8 005	4 177	22 145	1 916	361
Caribbean	5 779	3 974	14 445	1 454	400
Latin America	149 099	34 229	662 470	4 356	225
Canada	21 363	439	74 600	48 663	286
ACP	77 787	93 550	494 496	832	157
US	153 233	3 320	418 250	46 154	366

Source: Authors' calculations based on information from the FAO Statistical Databases (FAOSTAT).

Figure 2
RANKING OF COUNTRIES STUDIED, BY LABOUR PRODUCTIVITY LEVELS IN 1995
(Index USA=100)



Source: Own calculations based on information from FAO Statistical Databases (FAOSTAT).

Table 7 shows that some interblock gaps in land productivity are smaller than those for labour productivity. For nine of the countries studied, the land productivity index exceeds the base value (United States) in 16 percentage points or more. These countries —listed from highest to lowest in the index— are Barbados, Belize, Trinidad and Tobago, Jamaica, Haiti and the Dominican Republic. Moreover, of those ranked lower than the United States, three countries (Honduras, Cuba

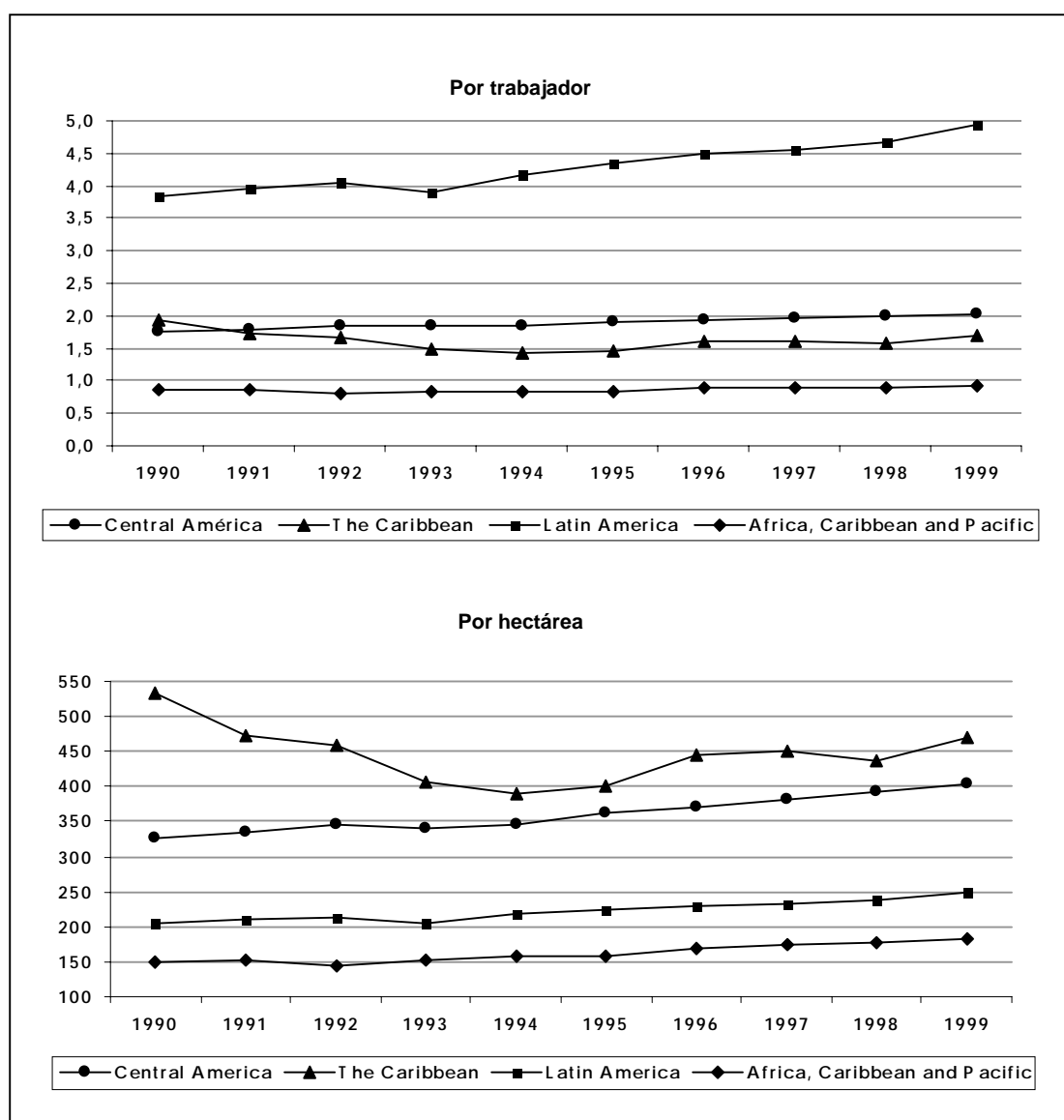
and Panama) come very close, with indices above 90. The countries lagging furthest behind are Guyana and Nicaragua, with indices that stand at 49.8 and 32.2, respectively.

Finally, figure 3 reveals the dynamics of land and labour productivities in this sector, for the blocks of interest. Clearly (since 1994) Central America and the Caribbean show rising trends in both indicators although increases in land productivity are more significant. Despite this, large gaps remain, particularly compared to Latin American competitors, in the case of the labour factor. In the case of land, despite the fact that disparities are not as pronounced, the countries studied show significant advantages over their competitors in Latin America and the ACP block.

Figure 3

LABOUR AND LAND PRODUCTIVITY IN THE AGRICULTURAL SECTOR, 1990-1999

(US\$ thousands Elteto-Koves-Szulc (EKS))



Source: Productivity levels from table 7, extrapolated using aggregate value series for agriculture in constant 1995 dollars, from the World Bank's World Development Indicators (WDI), and series for the economically active population and land used in agriculture from the FAO Statistical Databases (FAOSTAT).

Previously, we established what the most relevant products in terms of *ex-post* competitiveness were, classified under two categories: products representing traditional specialization patterns and products representing incipient or weak specialization, and, for this last category, distinguishing between cases where specialization was occurring within both blocks or just in one of them. Moreover, regarding the degree of incipient or weak specialization in one or both blocks, products were defined as strong or weak, in terms of their *ex-post* performance.

The additional perspective afforded by this categorization is most relevant in terms of the subregions. In this section, however, we are analysing *ex-ante* competitive conditions for products in these categories, but from the perspective of countries and not from the aggregate view afforded by blocks. Of the product list initially established, our analysis focuses on eight items selected at the end of the previous chapter. We argued that because of their relevance to the region's countries and recent trends in their international competitiveness, the products in question deserved a more indepth analysis. These items are: (a) bananas, coffee and sugar cane, among the group of traditional specialties; (b) melons and papayas in the group showing a weak trend toward specialization in both blocks; (c) sesame seeds in terms of weak specialization in Central America, and (d) cocoa and oranges in terms of weak specialization in the Caribbean.

This analysis focuses on two variables: physical land yields and relative price levels. In both cases, calculations include both the countries studied, individually considered, and the main competitor countries, previously identified for each of the selected items. Nonetheless, it should be understood that the advantages deriving from the following analysis, based on indicators that indicate potential competitiveness, should not be interpreted as actual or established advantages, because the relative price does not incorporate systemic conditioners that complete overall competitiveness of an item and a sector. The latter means that the fact that domestic producers enjoy lower producer prices than their foreign competitors does not necessarily mean that they will actually be more competitive, because farm-to-market transportation costs, quality of road and port infrastructure, packing processes or cold chain, are not considered, and these are all elements that contribute to the true competitiveness of local agrifood chains. In this sense, then, indicators for the level and growth of physical yields, combined with relative prices, highlight advantages within agricultural operations and whether these contribute or could contribute to more competitive performances in reality. As a result, identifying the items for which farm conditions are favourable as a function of these indicators is relevant to encouraging system studies of competitiveness that could improve strategies for development and encourage export production in the countries studied.

In the case of physical land yields, calculated for each of the eight selected agricultural products and for the 1990s period using figures from the FAO Statistical Databases (FAOSTAT), a variable was created that indicates the productivity for the period considered. Moreover, for each country and product the average growth rate for productivity during the same period was measured, to be able to analyse trends in performance for these items.

In the case of relative prices, this indicator corresponds to an index that measures producer prices (on-the-farm price) of a commodity in one country compared to the price for the same product in a reference country, in this case, Brazil.²¹ The data used to calculate this indicator corresponds to 1995 producer prices from FAOSTAT,²² corrected for the EKS RVU²³ and the nominal exchange rate to calculate relative prices in a single currency. The relative price index thus constructed takes the unit value for Brazil, the reference country, so if this index is less than 1 for a

²¹ An initial exercise was performed using the United States as the reference country but finally Brazil was selected for calculating this indicator, because it produces all the agricultural items selected and as a result has producer prices for all of them, unlike the United States. As was to be expected, the ranking when the US was used as the reference country for US products did produce similar results to those where Brazil was used as the reference country.

²² The data for agricultural product prices from the FAO Statistical Databases (FAOSTAT) was discontinued in 1996.

²³ Recalculated to be expressed in reales, the reference country currency.

country, this means its producer price is lower than the one observed in Brazil, and vice versa where this indicator is greater than 1. Domestic farmers that are able to produce at lower prices are more competitive, which will be reflected in a lower relative price index value.

Therefore, to analyse countries' competitive performance in terms of physical yields and prices, we have added a set of ten countries that appear as the main competitors in the selected commodities: (a) for bananas, Colombia and Ecuador; (b) in the case of coffee we have included Colombia, Brazil and Vietnam; (c) for sugar cane, Brazil and the Mauritius Islands; (d) for melons and papayas, Brazil and Mexico, who also compete with sesame, along with India; (e) for cocoa, the Ivory Coast and Indonesia, and finally, (f) in the case of oranges, we have included Australia and Mexico. In terms of the countries studied, note that the per product analysis carried out does not examine all of them, but only the main exporters and the handful of cases that might one day consolidate their role among exporters. The selection criteria for this preliminary exercise was based on the ranking in terms of market share of 14 countries, for eight products, with this analysis including all countries with significant market shares.

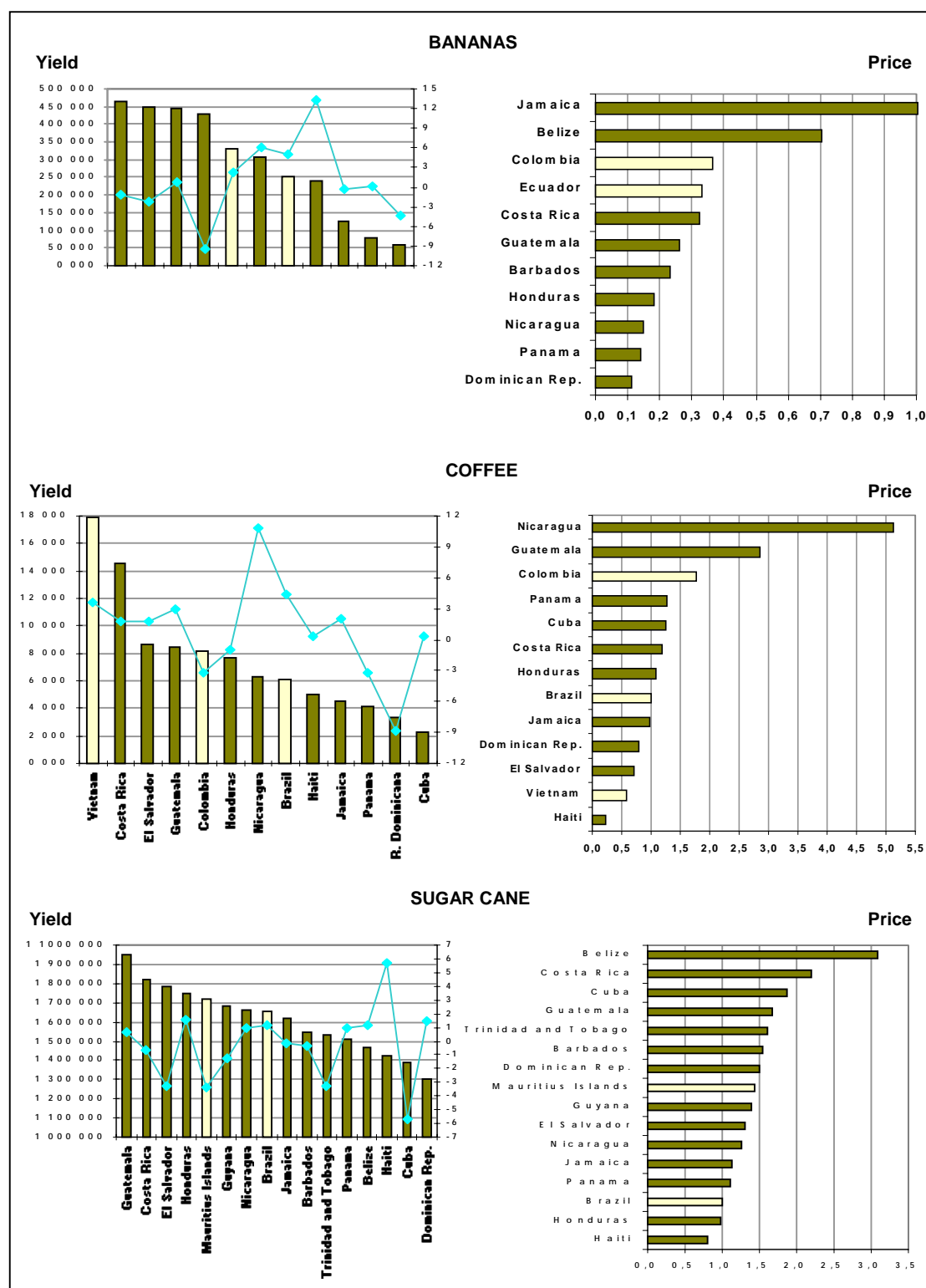
Figure 4²⁴ summarizes all aspects described so far. It provides the results in terms of land productivity level and productivity growth, by product, as well as providing the relative price index. Depending on the product and the market share criteria, the selected countries appear in the figures, along with two or three of the main competitors. Moreover, the set of figures is divided among specialization categories as defined early in this section. These elements will now help us to visualize the main results of this analysis for *ex-ante* competitiveness.

²⁴ In figures for yields, the left vertical axis measures land productivity for each product and has been calculated as the annual average of physical yields obtained from 1990 to 1999, using figures from the FAO Statistical Databases (FAOSTAT). This average annual yield is expressed in Hg/Ha using bars, with the clearest corresponding to the main competitors for each product. The right vertical axis, in contrast, measures the average annual growth rate (from 1990 to 1999) in land productivity, obtained for countries and for each item, and is represented using a polygonal curve.

The figures that refer to prices represent the relative price posted by the country in 1995 for the different products. This relative price is the price of the product to the producer in a country, corrected using the unit value ratio (RVU) and the nominal exchange rate, compared to the producer's price for the same item in Brazil.

Figure 4

ANALYSIS OF YIELDS AND RELATIVE PRODUCER PRICES, 1990-1999
(a) PRODUCTS OF TRADITIONAL SPECIALIZATION (BANANAS, COFFEE AND SUGAR CANE)



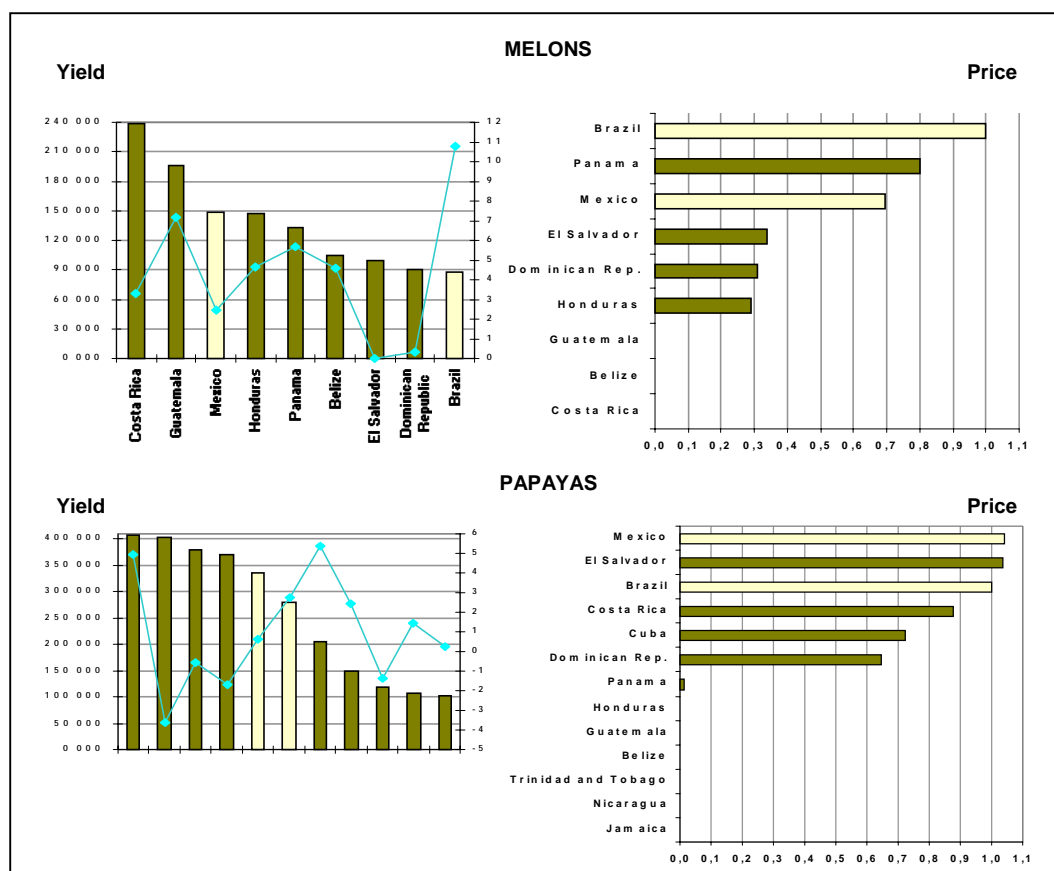
Source: Author's calculations based on information from FAO Statistical Databases (FAOSTAT).

(i) **Bananas:** For this product, Costa Rica, Panama, Honduras and Guatemala (the consolidated exporters) fall within the range of countries with high levels of land yields (over 300,000 Hg/Ha), outdoing productivity even in Colombia and Ecuador, their main competitors in the EU and US markets. The three Central American countries moreover have relative price indices that are lower than those achieved by their competitors. Belize, a minor banana exporter, is showing it has the potential to push production higher, because despite its low productivity, yields have averaged 13% annual rises in the past decade (the highest growth among the countries considered); however, this is one of the countries with the highest relative prices.

(ii) **Unroasted coffee:** Among the countries studied, Costa Rica is the one showing the highest physical yield, outdoing even Colombia and Brazil, but facing strong competition from Vietnam, which also occurs in terms of relative prices. Nicaragua is experiencing the most growth in yields per cultivated area, almost 11% annually, but also has the highest relative prices for production. Brazil, in contrast, has improved yields more slowly, 4% annually, but enjoys advantages in terms of production prices. Vietnam has shown a similar pattern of behaviour, emerging as a world producer of this commodity. The position of the other traditional producer/exporter, Colombia, is very different, with shrinking coffee yields and the third highest relative price. In many cases, however, underlying these results is a clear strategy of differentiation in terms of quality in some market niches, where price levels and productivity are not very important.

(iii) **Sugar cane:** For this item, Haiti has performed outstandingly in terms of growth and, moreover, enjoys a lower relative price, despite the fact that production levels per hectare harvested remain among the lowest. Conditions in Cuba, a traditional producer of this item, should be noted: figure 5 shows a decline in land productivity of about 6% annually, the largest for the group, and the third highest relative price. Brazil, in contrast, is gaining competitively in this item, posting the third lowest relative price index and growth in land yields of 1.2% annually.

Figure 4 (cont.)
(b) STRONG POINTS IN BOTH BLOCKS (MELONS AND PAPAYAS)

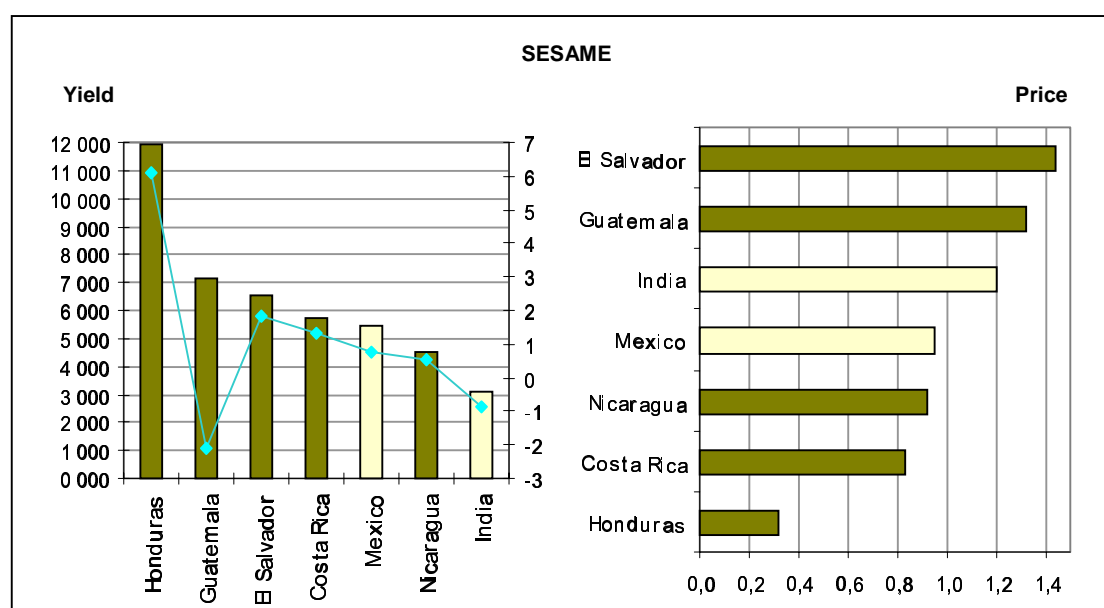


Source: Author's calculations based on information from FAO Statistical Databases (FAOSTAT).

(i) Melons: For this product, Brazil has seen land productivity grow the most. However, its relative price index is also the highest. Mexico has a high yield index, but does not enjoy any price advantages. Thus, Costa Rica and Guatemala enjoy very competitive positions, posting good results for both productivity and relative prices.

(ii) Papayas: This product has grown significantly in Jamaica and Costa Rica, with productivity rising by more than 4%, while Mexico is posting growth of about 3%, Cuba 2.5% and El Salvador 1.5%. In Brazil, growth has been less significant. In terms of relative prices, Panama, Honduras, Guatemala, Belize, Trinidad and Tobago, Nicaragua and Jamaica enjoy the most advantages.

Figure 4 (cont.)
(c) LOST OPPORTUNITIES IN CENTRAL AMERICA (SESAME)

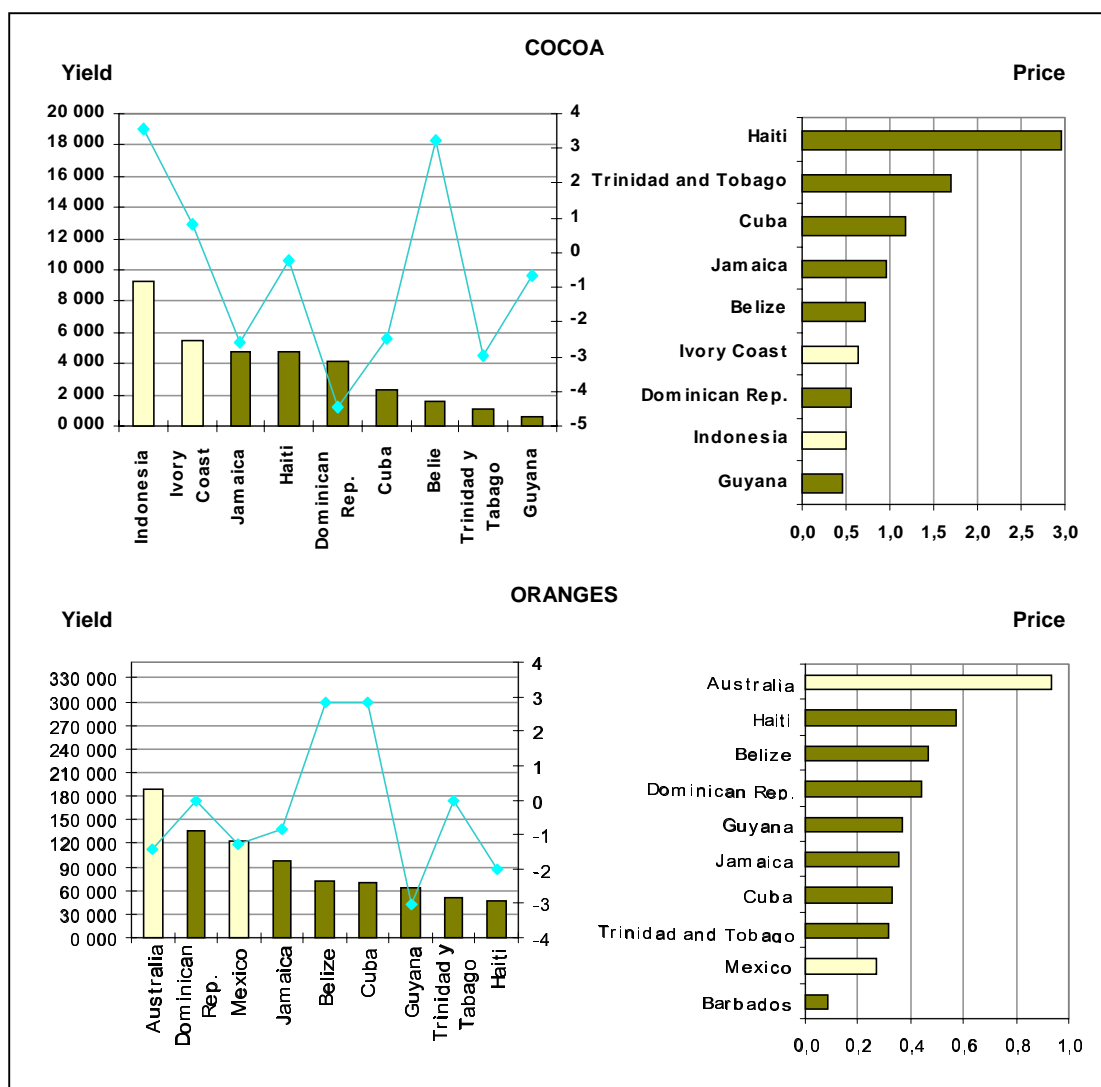


Source: Author's calculations based on information from FAO Statistical Databases (FAOSTAT).

Sesame Seeds:

Physical yields for sesame seeds have turned this untraditional export into a relatively active performer for Central America (except for Panama and Guatemala). Honduras, El Salvador and Costa Rica have posted the best yields, outdoing Mexico and India, and undoubtedly Costa Rica and Honduras reveal the most competitive relative price indices for production.

Figure 4 (conclusion)
(d) LOST OPPORTUNITIES IN THE CARIBBEAN (COCOA AND ORANGES)



Source: Author's calculations based on information from FAO Statistical Databases (FAOSTAT).

(i) **Cocoa:** This product, considered a lost opportunity in a previous section, has revealed enormous potential in the Caribbean countries, especially Belize, where land productivity rose 3% on average annually (the highest rate for the selected countries) and one of the countries with the lowest prices to producers. However, there is strong competition from Indonesia and the Ivory Coast, which both enjoy the highest productivity levels for the sample and their relative prices are lower than those of Belize. The Dominican Republic also enjoys a slight price advantage over the Ivory Coast.

(ii) **Oranges:** The relevant competitors for this commodity, Australia and Mexico, enjoy higher productivity, although the former has higher relative prices and Mexico enjoys a very advantageous price position. In this sense, countries such as Belize and the Dominican Republic offer attractive opportunities for developing this product's export potential. This item also shows good potential and significant incipient development in Cuba: there, prices are low and land productivity has soared in the past decade, with operations strongly associated with processing activities, particularly juice and concentrates.

C. Integrated synthesis of *ex-ante* and *ex-post* competitiveness

Now that the most relevant facts in terms of internal farm conditions have been examined, some of the facts common to both *ex-ante* and *ex-post* situations can be synthesized.

Two situations arise with regard to traditional products. In contrast to the international markets for sugar and, to a lesser degree, bananas, the unroasted coffee market enjoys free access conditions that make it possible to associate *ex-ante* and *ex-post* competitiveness. In this last market, there is room for both price competition and differentiation by quality, and because of this it is apparent that both countries (Vietnam in particular) with price and yield advantages and other countries that apparently suffer from price disadvantages (Guatemala, Costa Rica and Honduras) have gained ground in the main import markets. In the case of bananas and sugar, some countries in the region could benefit in the long term from reforms to current trade policies in the main markets importing these products. This reflects price and/or yield advantages enjoyed by Costa Rica, Nicaragua, Panama and Honduras (bananas) and Honduras, Haiti and Guatemala (sugar) over their main competitors.

In terms of the region's main strong point in recent years, melons and papayas, Central American countries and, to a lesser degree, the Caribbean ones have been consolidating their place in international markets, apparently due to yields and price advantages over their main competitors. However, it should be kept in mind that in some of these markets the potential for differentiating between products was identified. Operating in this niche requires more investment in infrastructure, producing better quality varieties, and training labour, especially at the post-harvesting stages. This means that the whole chain must be prepared to supply a better quality product internationally. Being alert to this type of opportunity can help to improve regional producers' participation in international markets.

In terms of the main lost opportunities identified above, it is clear that in the case of *ex-ante* competitiveness at least at the farm level some of the subregion's countries are positioning themselves well against their main competitors. Sesame seeds from Honduras and Costa Rica, for example, enjoy both price and yield advantages over Mexico, their main competitor in the United States. Cocoa from Guyana and the Dominican Republic enjoys price but not yield advantages, over Indonesia and Ivory Coast. Finally, oranges from all producing countries in the subregion enjoy price advantages over Australia, the competitor whose share of the US market is growing the most. In this market, however, the better quality of the Australian fruit seems to give it an edge, as some reports from the United States Department of Agriculture suggest (see, for example, USDA, 2002).

It is worth underlining yet again that these variables reveal just a few of the features that condition so-called *ex-ante* competitiveness or potential in these countries, that is those dealing with basic aspects of agricultural farms and ranches. Moreover, future studies should analyse the other systemic requirements that would make it possible for the Central American and Caribbean countries to improve the performance of the products identified here in international markets.

III. Final considerations

The Central American and Caribbean countries considered in this study have been involved in many trade liberalization initiatives, as a result of the structural reforms promoted from 1980 to 1990; plurilateral ones, within the subregion and with third countries; and multilateral efforts led by the WTO. These initiatives are currently underway and their final results are difficult to foresee. In any case, the agrifood sector has been included, although only partially. In fact, this is the sector most affected by the surviving tariff and non-tariff barriers, as well as a significant part of the expenses in domestic support that distort international trade. In the case of agrifoods, the future negotiation agenda is particularly broad and complex, given how sensitive this sector is in developing and developed countries, and therefore the wide range of issues dealt with and interests involved.

The different positions on the question of special treatment afforded the agrifood sector in multilateral liberalization; the broad “reinstrumentation” of sectoral protection, maintaining its real level; in compliance with liberalization commitments; and the delays in starting a new round of negotiations, are all facts that illustrate how difficult it is to progress on a multilateral basis toward eliminating existing hurdles to agrifood trade. In the sphere of regional and/or country agreements, difficulties are as severe, with the agrifood sector responsible for most exceptions to free trade. Thus, the countries with the most comparative advantages in agrifood products are particularly vulnerable to instability in international markets, to distortions generated by support policies, and trade protection in the main importing countries.

The countries studied, together with other developing economies, receive the benefits of preferential forms of access to the markets of industrialized countries. Nonetheless, the policies of granting unilateral preferences are currently undergoing an in-depth review. For the countries of the ACP group, the Cotonou Agreement, signed in June 2000, establishes a change in strategy on the part of the EU, because for the first time policy makers are talking about the need to establish trade reciprocity. This change seems to have arisen based on evidence that preferential access has not improved the economic performance of the ACP countries in the past 25 years,²⁵ and the need to adjust the agreement to global trade trends and particularly the commitments countries have assumed within the framework of the WTO.

For the United States, major events have determined trends in preferential treatment afforded the Central American and Caribbean countries: the end of Communism and therefore the strategic importance of these countries for national security reasons; trends in multilateral trade openings within the WTO framework; progress in regional hemispheric integration; new issues important to regional security, such as drug trafficking and migratory movements toward the United States. Thus, although there is real concern in the region for maintaining economic stability and speeding up growth to avoid waves of illegal migration and a rise in drug production and trafficking, on the other there is also a trend toward eliminating non-reciprocal trade preferences and expanding free trade. The latter trend whether within the WTO or as part of hemispheric integration will undermine the preferences accumulated by the countries studied.

Faced with all these questions associated with the trade liberalization process currently underway, the countries studied take different positions, depending on the sector's importance to their economies and their current and potential competitive conditions. Some favour generalized liberalization of agrifood trade, while others are concerned about reduced trade preferences, rising international food prices and food safety issues. Nonetheless, these countries are virtually forced to participate in the move toward more open trade or risk being completely left out of the global trade and investment systems that these processes are generating.

In the context of partial liberalization of the agrifood sector, reduced preferential tariffs and the emergence of enormous challenges to the developing economies that specialize in agricultural trade, this study has sought to shed light on the fundamental issue of sectoral competitiveness. For the Central American and Caribbean countries studied, most of which are very specialized in the agrifood sector, the opportunities and challenges that arise from trade liberalization are linked with their current competitive conditions, as well as conditions for accessing import markets, as compared to those faced by their main competitor countries.

Among the most important agrifood markets for the countries studied, selected based on these countries' level of trade specialization and the performance of international demand, different competitive situations are apparent, with the countries studied gaining or losing ground to their main competitors. On one hand, their main strong points in terms of agrifood competitiveness can be found in the markets to which they enjoy preferential access as compared to their main competitors. This is the case with melons and papayas in the United States and the European Union, and other crustaceans (basically lobsters) in the EU. Nonetheless, in the US market for frozen shrimp, where there are no tariff preferences or barriers, the Central American countries have also improved their competitive position. Something similar has occurred in the case of coffee, in the US and the EU. Likewise, in the case of sugar imported by the US, evidence suggests these countries are more competitive than their main competitors, which benefit from the tariff quota system.

²⁵ One of the main concerns among policy makers in the countries benefiting from preferential tariff systems is their impact on these countries export and productive structures. As with the tariff structure in most of the developed countries, preferential systems are also scaled, that is, they benefit trade in commodities not produced in the import country, while they penalize trade in manufactured products. This could at least partly explain why preferential systems have failed to promote economic development in the countries benefited, since they do not encourage industrial development.

In terms of weak points or lost opportunities among the countries studied, the most worrisome cases are those where, even with preferential access compared to their main competitors, these countries are clearly losing ground in the marketplace. In this sense, the situation faced by Central American countries in the US market for bovine meat and that faced by the Caribbean countries in the US market for oranges and the EU market for rum are worthy of note. In the other cases of lost opportunities (sesame seeds, live plants and palm oil for Central America and cocoa for the Caribbean), these are markets where both the countries studied and the other export countries enjoy free access.

Generally speaking, the European market for the agrifood products relevant to the countries studied is more protected than that of the US, especially taking into consideration the preferential tariffs granted in each case. Because of this, there is also more room for preferential treatment in the European market. In effect, the preferences that EU members have granted to the Caribbean countries already guarantee free access to the relevant agrifood products from this subregion. Moreover, in the case of sugar and bananas, tariff quotas likewise benefit the Caribbean countries. Meanwhile, the Central American countries face access conditions to the European market that are less favourable than those enjoyed by the Caribbean ones, but nonetheless more favourable than their main competitors. In the case of the US, important competitors such as Canada, Mexico, and the Andean countries face access conditions that are as or more favourable (Canada's case) than the countries studied, at least in terms of the agrifood products selected for this study.

The above allows us to state that market liberalization in Europe, or the establishment of free trade agreements with important competitors from South America, Asia or the Mediterranean will have a negative effect on agrifood exports from the countries studied (mainly those from the Caribbean) and this will probably be more intense than liberalization of the US market. In terms of the FTAA, tariff protection today in the US is not significant for agrifood products from the countries studied (except for sugar), although it is for some important South American competitors. As a result, with liberalization of the sugar market not included, the creation of the FTAA could hurt more than help the agrifood sectors in the Central American and Caribbean countries, given that it will more positively affect the access of regional competitors in the selected products.

Similarly, it is worth underlining the importance of non-tariff issues within the liberalization process, although these do not form part of the objectives of the present study's analysis. In some cases, non-tariff measures, especially the technical barriers and price control measures (antidumping and countervailing duties, among others) represent more significant hurdles to trade than tariff barriers themselves. Technical barriers include quality control of products, packaging and labelling requirements, sanitary and phytosanitary measures and restrictions based on labour or environmental protection in the export country (ECLAC, 1999a). Although the importance of these measures is important in response to the growing demand from the public for food that does not pose a threat to health and the environment, it is apparent that in some cases technical barriers are used for purely trade purposes, with no justification for the high standards required.²⁶ Similarly, in the case of price control measures, these are used primarily in the more traditional areas of production and hurt mainly exports from developing countries, with no sign of "constructive" solutions being sought (ECLAC, 1999a). It should be noted that both technical barriers and contingent protection measures (price controls) were regulated by specific WTO agreements based on the Uruguay Round. Nonetheless, countries continue to enjoy relative autonomy in their application of these measures, leaving room for their use to achieve protectionist ends. Their inclusion in trade negotiations is therefore essential.

²⁶ In this sense, one of the most recent concerns of countries exporting food to developed countries, especially the United States, are the security measures announced for imports in response to bioterrorism threats. The so-called trade shield specifies quality and safety criteria that must be extended to agricultural producers, representing a high cost for the agrifood chain in exporting countries. Their effects on this sector's trade remain unpredictable.

In the area of domestic support policies, it is clear that although this study considers the US and the EU solely as import markets, in the process of trade liberalization they also become important as exporters of certain agrifood products. In many cases, these products are heavily subsidized. In fact, to a greater or lesser degree most industrialized countries subsidize their agrifood production. Given the importance of domestic support policies to the agrifood sector as a barrier to free trade and a source of destabilization in the case of trade and international prices, these measures were also discussed during the Uruguay Round negotiations. As a result, support policies were classified according to their impact on production and trade,²⁷ and each one was covered by a specific regulation. WTO member countries committed themselves to reducing the measures that generate the most distortions in production and trade,²⁸ and to limiting the use of export subsidies. WTO reports, however, reveal that developed countries in particular are maintaining the level of domestic assistance to this sector, although they are increasingly using measures permitted under the Uruguay Round, in a process that is being called “reinstrumentation” of domestic support policies (WTO, 2001). In the area of export subsidies, the institution admits that despite the overall decrease, for some products (wheat and wheat flour, powdered milk and cheese) the reduction that members agreed to continues to allow rather broad application of this type of measure.²⁹

Perhaps most importantly, in recent years we have seen what could be considered a step backward in terms of developed countries’ commitments to reducing support policies, with the publication of the new Agricultural Law in the United States. According to Tussie (2002), the new law increases tools for protecting and assisting domestic agriculture and support funds. It is very likely, due to the nature of the mechanisms used, that these will outstrip the WTO’s “Total Aggregate Measurement of Support” (Total AMS). In response, retaliation can be expected from the United States’ main agrifood trading partners, which already began with Mexico’s “Agricultural Shield” programme, although the funds available in Latin America for this type of reaction are very limited. Thus, for the agrifood sector in the countries studied, the net result of liberalization will largely depend on the progress of domestic policies in developed countries, especially trading partners as important to the subregion as the United States.

Trade liberalization and/or the reduction in preferential tariffs ultimately raise the question of the growing importance of *ex-ante* competitiveness in defining exporting countries’ performance. From the *ex-ante* perspective, this methodology revealed enormous differences in the patterns of agricultural development among the 14 countries studied. In terms of agricultural labour productivity, the results reveal very different levels of well-being and quality of life among the populations that make their living in this sector. Many elements, whether technological or those dealing with human capital and even investment in research and development (R&D), are behind these widely varying results, which must be improved not only from the perspective of international trade, but also in terms of domestic economies, in relation to food safety. The land productivity analysis at the aggregate level also found gaps and disparities among blocks and countries, but these were less profound than in the case of labour productivity. Nonetheless, an essential aspect to be dealt with in future studies and in agricultural policy planning arises from the need to integrate productivity factors with a multi-factor productivity approach, that takes into consideration the processes of technical change or the state of productive efficiency of domestic agriculture in order to identify domestic requirements for improving international competitiveness.

Similarly, it is worth discussing the usefulness of considering a broad approach to the issue of competitiveness, which takes into account the strategies, potentials and limitations of the different

²⁷ Domestic support policies were classified into three main categories: amber (slow down), for the policies with the most distortive effect, which should be reduced without permitting the application of new ones; green (permitted), for measures not directly associated with production and that have a minimal effect on trade (these can be freely applied); and blue, for subsidies tied to agricultural modernization or reform programmes that limit production (these are freed on a provisional basis).

²⁸ A 20% cut in six years in the case of developed countries and 13% over ten years for developing countries.

²⁹ According to the World Trade Organization (WTO, 2001), in the case of these products, the subsidy levels permitted account for 40% to 60% of the value of their exports worldwide.

segments of the chain, as well as the interactions among them. According to Esser *et al.* (1996), the study of competitiveness should take place within a systemic perspective, based on interrelationships at four levels: the micro level (the company and its value-chain), the meso level (including the legal and regulatory policies that affect the subsystem); the macro level (foreign exchange, budgetary, fiscal and trade policies); and the meta level (judicial, socio-economic, cultural and political factors). A firm's competitiveness (with regard to a product) does not depend solely on the competitive conditions within the markets where it performs, nor its own strategies and characteristics. It is a complex result associated with competitive conditions in the network of suppliers and customers with which it operates and the regulatory context in which companies are submerged.

The systemic analysis of the competitiveness of specific agrifood products in selected markets must take into consideration the stages of international commercialization and distribution, the channels by which this is realized and the agents in destination markets; the study of competitive and regulatory conditions in those markets, the performance of consumption patterns, the importance and the strategies of their main competitors (countries, transnational companies); changes in the international regulatory context. In this study, we have tried to advance in some of the areas highlighted earlier and in particular defined a small group of products that is worth analysing in more depth. These products are the following: the three items that the subregion has traditionally specialized in (sugar, bananas and coffee), given their crucial importance to the subregion's economy; the main strong points in terms of *ex-post* competitiveness (melons, papayas and crustaceans, except shrimp), to identify possible ways of improving these countries' systemic competitiveness in those markets, taking advantage of demand's behaviour and preparing for a possible reduction in preferences, and the main lost opportunities (bovine meat and sesame seeds for Central America; oranges and cocoa beans for the Caribbean), attempting to identify existing problems and ways of correcting them.

For each of these products, we analysed some elements related to their *ex-ante* competitiveness, specifically those regarding yields and prices at the farm level. With regard to our findings, in very few cases did a clear pattern of behaviour appear for all the countries studied compared to their main competitors. Nor is there a clear link in the case of *ex-post* conditions. This is because to really have a comprehensive understanding of the problem, the analysis must include systemic conditioners that complete the competitive outlook. Despite this, some tendencies at the primary operating level were identified that could lead to concrete advantages for Central American and Caribbean countries in international markets. For example, in markets controlled by import quotas, such as that of sugar and to a lesser degree, bananas, some of the subregion's countries have proven to be competitive at the farm level compared to their main competitors, which could give them an edge if trade policies are extensively reformed in these markets (which seems feasible in the long term). The main strong points identify important yield and price advantages for Central American and Caribbean countries. What remains to be seen in these cases is whether the whole chain is also prepared to take advantage of the possibilities of markets for products differentiated by quality. Finally, among the main lost opportunities yield and price advantages also appear for some of the subregion's countries. These advantages, however, are more than offset by competitive disadvantages present throughout the chain, an issue well worth examining more closely in future studies.

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